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HARVARD BUSINESS REVIEW

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HARVARD BUSINESS REVIEW

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VOLUME XI
NUMBER 1

MYTHS AND REALITIES ABOUT SOVIET RUSSIA

By WALTER N. POLAKOV

REFLECTING upon myths and realities concerning Soviet Russia, one is tempted to cast a glance beyond the great fields of economics and engineering and to trespass on the adjoining domains of logic and mental hygiene in order to be able to approach the subject with a degree of objectivity befitting its importance. The anthropologists of the French school have demonstrated that primitive people are incapable of differentiating "ideas or images of objects by themselves, apart from the conditions and passions which evoke these ideas or are evoked by them," and thus the hopes or fears connected with objects or circumstances are always real to the primitive mind and form an integral part of its representations. It is deplorable, if not shocking, to observe in a civilized community strongly analogous representations. The very sound of words like "Soviet," "Bolsheviks," "communism," is so permeated with emotive power, so closely connected with the passion of fear in the average mind, that it requires a decided effort to differentiate the facts from the subjective attitude of a primitive nature, "prelogical" in its character.

Mythical Views about Soviet Russia

Some 15 years ago the act of enfranchising Russian women was translated by an ignorant or malicious correspondent as "nationalization." The horror created by the very thought of such an act became fixed in the popular mind, all the facts to the contrary notwithstanding. Reports of executions of innocent people by the tens of thousands were read with equally morbid eagerness here in the United States; tales of forced and convict labor similarly provided reading on a par with other front-page entertainments describing machine-gun murders, kidnapings, rapes, and such other news of daily occurrence. Eventually, the association of horrors and destruction with the Bolshevik régime in Soviet Russia became fixed in the popular mind, and as much credence was given to these sensational stories

as to the local accounts of exploits of our rum runners, gangsters and racketeers.

Thus a definite mythology concerning the Soviets was established. An authority on the subject, Karl Bickel, head of the United Press Association, stated some time ago that by actual count 95 *per cent* of the press dispatches about Russia originating in Helsingfors, Riga, Warsaw and Bucharest, which are centers of anti-Soviet agitation, contained demonstrably false reports, such as those of assassinations, massacres, revolts, *etc.*

Another prolific source of many myths concerning Soviet Russia is what may be termed "wishful thinking." A strong and persistent desire may affect certain persons to the extent that a wished-for notion assumes for them all the appearances of a reality, and its contradiction to fact is utterly disregarded. If, however, that stage of illusion is not yet reached, all efforts are exerted to "rationalize" the possibility, probability and inevitability of the wished-for event. Many Russian émigrés, some of them formerly of the nobility or of the financial or military classes, who after the Revolution lost their special privileges and were unwilling to do any productive work in their native land, settled in foreign capitals—Berlin, Paris, London, New York, and the above-mentioned "border" capitals. There they lived for a while on the valuables which they had managed to take away; then they gradually drifted into occupations which continually bring up a contrast between their unenviable present and recollections of their heedless past. To them current events in Soviet Russia are not personally known; they read Russian newspapers especially catering to their idiosyncrasies, irrespective of facts. Their outlook is inevitably not objective but strongly colored by emotions; for them Sovietism is identical with personal misfortune, past losses and present "humiliation." Their only hope is the restoration of their past privileges and fortunes, and this strong and continued desire tends to be confused with reality, eventually forming an illusory belief that the present régime in the U.S.S.R. is only a temporary phenomenon, like a nightmare. This living in a fancied world breeds a hope tantamount to conviction that the existing régime is a temporary one and quite unstable. Such a mental delusion finds its expression even in the contemporary American press: the *Magazine of Wall Street* recently published an article which contained one more prediction of the collapse of the Soviet Union by June, 1932, which is only one of a long line of such predictions made here and there during the last 15 years.

Mathematical logic knows the effect of these tacitly accepted postulates which are so swiftly and inevitably followed by deductions. Now, if our postulates are based on assumptions which do not correspond to fact, our deductions, however rigorously worked out, are then fallacious, bearing relation to our desires, fears, beliefs, and certain uncritically accepted doctrines, but not to the verifiable, demonstrable facts. As Professor *emeritus* Cassius J. Keyser of Columbia University says, "Since the principles, or postulates, are chosen, the die is cast—all else follows with a necessity, a compulsion, an inevitability that are absolute—we are at once subject to a destiny of consequences . . . "

What relation has this to our subject? Just this: once, for whatever reason or even without any reason, we

accept a statement that does not correspond to reality, even if we are calm and serene and are in no other way biased, we are no longer capable of forming a conclusion, a deduction that will correspond to the reality involved. Hence it will not be possible, if we are at all logical, to shape our attitudes and action in a manner that will be helpful in dealing with the given reality—for the whole structure will be as false as the starting proposition.

This logical destiny affects equally those who have only verbal information concerning the Soviet Union and those who have visited that country. Generally tourists return from Russia more strongly confirmed in their preconceived attitudes than they were before—for they seek and find in that vast and multivaried country an adequate number of observations to satisfy their desires.

And so, both these subtle forces—representations of a primitive form, the failure to distinguish subjective attitudes from objective realities, and the logical destiny of conclusions based on incorrect preconceived postulates—go on, creating in some circles a strange, morbid mythology about Soviet Russia, with *fear* of its pernicious influence and *hope* for its prompt collapse.

The Business Effects of Such Views

Yet in European countries, nearer to the scene of events, even the existing political and economic enmity does not preclude statesmen and business men from seeing the realities of the situation. Great Britain, Germany, France, and other countries maintain both diplomatic and normal economic relations with the Soviets and derive measurable benefits therefrom. During the last year, Germany, having benefited by the breathing spell of the moratorium which we granted, was able and willing to extend favorable credits to the U.S.S.R.—guaranteed by the German Government up to 60 *per cent* of the amount of the Russian orders. Under such circumstances German manufacturers can wait for the first payment 13 months and for the final payment some 33 months from the date of delivery, give a reasonable volume of orders for materials, and meet their pay rolls, thus providing much-needed employment for their unemployed. Under this impetus, Soviet purchases from Germany increased from $135,060,000 in 1930 to $219,148,000 in 1931, *i.e.*, by $84,088,000. At the same time, despite our own business depression, despite our own 6,000,000 or more of unemployed, the effect of "prelogical" thinking, wishful thinking, and morbid mythology was played up by some interests with such telling results that our own sales to Soviet Russia shrank by $7,924,000. Soviet purchases in the U. S. A. totaled $111,362,000 in 1930, $103,438,000 in 1931, and less than $7,000,000 during the first six months of 1932.

Our Government spends every year about $60,000,000 for the promotion of foreign trade. A substantial part of this is expended in countries in remote parts of the globe where we do practically no business; none, or virtually none, of it is used for the stimulation of American-Soviet trade. Yet the official statistics show that our trade with the U.S.S.R. has consistently shown a favorable trade balance, reaching $90,013,000 in 1930, and $90,600,000 in 1931 (27 *per cent* of our total favorable balance in 1931). On the other hand, our foreign trade with Latin America shows an unfavorable trade balance of $200,000,000—our imports from Latin America being $547,000,000 and our

exports to Latin America being $347,000,000.[1]

The trend of our export-import trade with the U.S.S.R. has some interesting characteristics. While we export now to the U.S.S.R. nearly five times as much as we did to Imperial Russia, we now import from the U.S.S.R. less than before the World War. Imperial Russia shipped to us 1.2 *per cent* of our total imports, while from Soviet Russia we bought only 0.6 *per cent* of our total foreign purchases. And what is the nature of our Russian imports? Are the products we buy capable of displacing American labor, do they reduce employment, depress business? According to the *New York Times*,[2] "The Soviet Union shipments to this country are generally in the form of raw materials and products of the soil, while our factories supply machinery and supplies for Russia's industrial machine." In other words, Theodore Roosevelt's argument in favor of trade with Latin American countries—that they "are predominatingly agricultural, or producers of raw materials"—is applicable here also. Is not, then, Roosevelt's conclusion, "We . . . need one another," as applicable to our trade with the U.S.S.R.?

Who are the objectors to trade with the U.S.S.R. and on what are their objections based? Among the petitioners asking our Treasury Department to place an embargo on Soviet products, we see the Manganese Producers Association, the Arizona Asbestos Association, and certain lumber associations—*i.e.*, those whose interests are small against the scale of total national economics. If their restricted and purely local interests are hurt by Russian imports, the more important national industries that are using Russian raw materials, such as the steel industry (requiring manganese), the pulp and paper industry (using Russian pulpwood), and the American industries using Russian furs, bristles, casings, *etc.*, are not among the petitioners and lobbyists. This fact is significant.

Again, the "moral" grounds upon which the objectors attempt to "rationalize" (I use the word in its psychiatric meaning) their objections to the import competition are just the kind we have alluded to above. Chief of these is the myth of "forced" labor in the Soviet Union. Among the more responsible and better-informed industrial and political groups, this myth is definitely discredited. Many official and unofficial inquiries have established the fact of the "free and enthusiastic character of labor" in Soviet Russia. Shall I quote a few such testimonies? It is hardly necessary, but we may recall the statement of Maj. General Haskell, Commander of the New York National Guard, in the *New York Times*.[3] "I was led to the conclusion that the Russian worker is as a rule more willing and enthusiastic than the American . . . The factory means something closer to him than to his American brother . . . There is no gainsaying the fact that the life of the worker in Russia today is better than it was before the revolution . . . Today the worker has a feeling that he counts—and has a vast hope for the future. In czarist days he had nothing."

Likewise, the Delegation of the Timber Trade Federation of the United Kingdom reported in September, 1931: "Everything we saw contradicted the

[1] Winkler, Dr. Max. *The Index*, New York Trust Company, March, 1932.

[2] March 20, 1932.

[3] July 5, 1931.

suggestion of compulsion . . . The output we saw could not be sustained under any other system than satisfactorily paid, voluntary labour, and no scrap of evidence could be obtained that they were ever different from those we saw."

Recent press reports would seem to indicate that the myths and primitive subjective representations concerning the Soviet Union are now beginning to be correctly evaluated. Senator Joseph T. Robinson (Arkansas), Representative H. T. Rainey (Illinois), and other members of Congress are advocating normal trade relations with Soviet Russia, which necessitate normal consular and diplomatic relations.[4] Senator Robinson is quoted as saying: "I believe that prompt consideration should now be given to the establishment of diplomatic and trade relations with Russia." "Such a course," he explains, "does not involve approval of the political policies of the Soviet Republic. It means the application of well-established principles of international law as well as the recognition of the significance of export trade to the problem of unemployment, now the most acute of all our difficulties." Representative Rainey pointed to the Department of Commerce figures, which show that not only are nearly 3,000,000 American workers dependent upon export-trade jobs, but that every state in the Union benefits from this trade. "While our exports dropped more than 50 *per cent* since 1929, the worst drop was noted in our exports to Russia, due to poor credit terms and lack of consular service . . . In the first two months of 1932 they totaled a bare $1,229,000. In two years our exports to Russia have fallen off approximately 95 *per cent.* German exports to Russia in the same time have increased 107 *per cent.*"[5]

The Problem of Restoring Sanity to the Situation; the Task of the Engineer

Admittedly these grim realities of our economic crisis, with millions of unemployed and billions of idle dollars, have, and will have for some time to come, considerable difficulty in overcoming the morbidity of psychic distortions created by the hosts of myths concerning the Soviet Union. The problem of restoring sanity is not an easy one. Yet in the case of mass psychology as in the case of individual disorder, the first step is always the demonstration that the error is based on some confusion of symbol with the thing symbolized. Frequently the entire distortion of reality is based simply on the symbolism of our language, on association of ideas with some words or even on the so-called "clang association." Does not the common use of the terms "Bolsheviks," "communism" and the like tend to create a somewhat unreasoned sense of danger? The balanced, reasoned, sensible attitude has become so rare by now, after a decade and a half of spell binding by misinformed or malicious writers, that the restoration of normal international relations and of profitable trade has became a complicated matter.

An orderly, regulated and profitable trade with Soviet Russia, no matter how favorable is the trade balance for the U. S. A., cannot continue to be beneficial to us indefinitely if it is restricted to such an item as the export of machinery. As a matter of fact, we have already exported for Soviet industry hundreds of millions of dollars' worth of our machinery. With the

[4] Representative A. J. Sabath of Illinois introduced in Congress a Bill for recognition of the Soviet Union.

[5] New York *World-Telegram*, April 21, 1932.

stringency of our credits to the Soviets and the leniency of our credits to Germany, we have simply handed over to German manufacturers this profitable export business. Can we recover it? The extension of favorable terms of sales will help, but this alone cannot develop trade to its full potentialities. Before one signs an order for machinery, the engineers must specify what type, kind, style, *etc.*, of machinery is wanted for the given production. This presupposes a familiarity with the market and with the performance of the available equipment. We buy one or another make of car because we know of them and because we know their performance either personally or from our neighbors and friends. Then we decide whether Packard or Plymouth is within our purse.

The drop in purchases of American machinery has led to a natural decline in the employment of American engineers in the U.S.S.R. Conversely, Germany, now selling machinery to the Soviets on long-term credits, also sends to Russia many of its unemployed engineers. Consciously or otherwise, they act as salesmen of German products, as instructors in the best use of German equipment, as advocates of German methods of organization and production technique. Once their point of view has become acceptable to Russian engineers and buyers, the main job of capturing the market is accomplished.

Now, our machinery is designed primarily with the aim of mass production in view—single-purpose, fool-proof, large-output units. To get the full benefit of such equipment the industry must be organized for mass production and managed along entirely different lines than are European industries, the whole structure of which is designed to meet the requirements of highly competitive restricted markets with limited series and job orders.

Obviously the entire object of Russian industrialization is that of mass production, noncompetitive and manned chiefly by the untrained, inexperienced workers drawn from the backward rural communities. Hence, the American type of equipment, and inevitably of production organization and management technique, is the one peculiarly fitted to meet Russian requirements. Yet, what do we hear of late concerning the young giants of Soviet industry, plants like those at Stalingrad and Nizhni Novgorod, equipped almost completely by American machinery and laid out according to modern American lines?

The Stalingrad plant was to produce over 140 tractors per day. The output for the entire month of July, 1930, was only 5 tractors. The problem of organization and management was in the way. No machinery, however perfect, and no plant, however large, can produce goods by themselves. It is not investments that secure production; it is not physical labor alone that insures the output of machines. It is management that plans, dispatches, and removes the obstacles in the flow of production, that provides the materials and tools in the right place at the right time and in the quantity needed. It is management that regulates the output of each minute part, every screw, washer and cog, so that they all flow into final assembly of the final product as and when needed. It is management that sees that nothing is in excess and nothing is short of the requirements or is below the specified accuracy of fitness. It is management that sees to it that every machine is in the "pink of condition," for mainte-

nance work is as essential to plant production as the care of the race horse is to the winning of the race.

It is management that assumes the responsibility that the orders issued are actually carried out. This means not only that materials and machines are there to do the work but also that the *men know what to do and how to do it,* for management is primarily an educational, leading function. It is not enough to say: "There, get the blueprints and materials, go to your machines and get us 140 tractors a day"—besides all this, there must be an *esprit de corps;* there must be that inner discipline of cooperation so strikingly exemplified by a baseball team. It takes time and will to create these conditions, even if all the facilities and knowledge are present.

Similarity of American and Soviet Management Problems

Are these dramatic episodes in Soviet industrial life proof of inability to learn to master production technique and the art of management? Not in the least. The Stalingrad tractor plant, the first modern mass production factory completed under the Five Year Plan, is a case in point. After the catastrophic early months, the Government and the trade unions concentrated on the weak spots with the result that production was steadily stepped up and reached 110 tractors per day in December, 1931, and the schedule of 140 per day by the middle of 1932. It has fallen to my lot on several occasions to point out[6] the fundamental managerial shortcomings in the young Soviet industry. It is significant that since I first made these statements every criticism and every prediction brought up in them have been borne out by the Soviet Government's taking sound and decisive steps to remedy the conditions and to accept some of the principles of modern methods of management.

For some time past, Soviet industrial leaders, like Mr. Mezhlauk, Vice Chairman of the State Planning Commission, have been combating what he called "an ugly, oriental expectation of miracles from machines" and emphasizing the importance of learning the technique of management. The difficulties that arose in the early stages of starting operations at the new plants are taken as object lessons to emphasize the importance of scientific management without which the plants may just as well stay idle. The temporary shutdown of the Nizhni Novgorod plant, which manufactures Ford-type cars, may be but a means of dramatizing this point, which the leaders want to make plain to the rank and file of the workers. When the wrinkles of maladministration coupled with poor labor discipline and "too much politics in business" are ironed out, the output of this plant may be expected to show the same progress as that at Stalingrad. Just so the newly built Kharkov tractor plant, profiting by the errors of Stalingrad, swung into production in a very short period of time: the output in October, 1931, was 49; November, 391; December, 803; January, 1932, 1,094; February, 1,345.

There is a valuable lesson in this and in similar incidents. Modern plants, equipped with up-to-date American machinery, can be fully productive only under a system of management which is devised and perfected for the given type of productive equipment. If one buys German machinery and

[6] *Harper's Monthly,* December, 1931; *Factory and Industrial Management,* February, 1932; *American Machinist,* August 13, 1931.

lays out the plant on the German or English scheme, one has to run it for a relatively small or serial production and organize the management accordingly. If one installs American machinery along the lines devised at River Rouge and other mass-production, conveyor-assembly plants, the management must be vastly different in its structure and technique.

Soviet industry has definitely committed itself to the large-scale units designed for continuous mass production of standardized articles. For a generation or two, if ever, there can be no reversal of this trend. Of course, Germany can and does copy American designs for the Soviet market. But what is easy to copy in the tangible, concrete machinery is not easy, if at all possible, to copy in the intangible mode of use, habits of industry, methods of management, emphasis of shop organization, *etc.* Yet, if Soviet industry is to get the most out of the dollars invested in American equipment, and if the United States is to assure the future of the Soviet market, there is no other alternative but to supplement "machines" by "brains." America must export organizers and managers, and not just designers and builders, to the Soviet Union.

Here again, as in the case of exports of merchandise, a really satisfactory solution depends in the final analysis upon the establishment of normal trade and diplomatic relations, such as have been established by Germany, Great Britain and other countries. The presence of official American representatives on the spot would make it possible to receive more adequate reports of the requirements both of equipment and of technical skill and of the conditions existing for their utilization. This would also make it possible to analyze with some degree of success the maze of conflicting reports circulated in this country regarding the Soviet Union and to sift the true from the false.

"There are billions of dollars' worth of future orders in Russia for American workers to fill," Senator Johnson said recently, "and in these times it is simply economic idiocy for America to preclude Americans from trade and commerce which so readily could be obtained."[7] Perhaps this, and many other similar utterances by responsible American leaders in industry, finance and statecraft which have appeared recently in the press, presage a return to economic sanity.

The Attainments of the Soviet "Experiment"

This is more than just logic; and, in these days when we are accustomed to saying that there is no logical reason for the sun to rise tomorrow merely because it has done so heretofore, we must go into statistics and the theory of probability to gain confidence that in the future payments will be met by the Soviets as well as they have been in the past.

The vice president of the International Motors Corporation, writing in *Mechanical Engineering*, July, 1932, says that the U.S.S.R. experiments "go off rather well." Now, the slogan of Soviet Russia's industrial development is "to catch up with and overtake the leading industrial countries" as well as to fulfill the "Five Year Plan's task in four years." Is this aim feasible, and if so, are the Soviets on the right track? That Russia is almost incredibly rich in natural resources is well known; what is generally underestimated is that she is likewise rich in man power.

[7] *New York Times*, April 24, 1932.

The traditional Russian mode of farming was the three-field strip system with the fields tilled by the primitive wooden plow and harrow, sown with unselected seeds, and the cows herded in communal pastures. With these poorly cultivated fields and with the low standard of living and hygiene, any caprice of the climate would create a more or less extended famine and plague. To guarantee "bread and butter" the whole structure of agricultural life had to be revamped. This meant tractors, deep plowing, cultivators, combines, artificial fertilizers, special seed selection, large dairy and poultry farms and cattle ranches, irrigation, better dwellings, better hygiene.

And this meant development of coal and iron mines, steel mills, machine shops, engineering schools, better roads, education of adults, and nurseries and schools for children. In a word, the Soviets had to create a modern industry to insure a higher standard of living and the very security of life. And they had no time to waste; they had to utilize the emotional high tide, to concentrate their efforts on doing the job in the shortest possible time.

But can an enterprise so stupendous, so ambitious as almost to overtax the imagination—the rebirth of a backward agricultural nation and the creation of an advanced industrial nation—be attained in the course of a few years? Such a question is ridiculous in itself; it is easy to ridicule such an aim, but there is no such aim. The first Five Year Plan, the second Five Year Plan, and all succeeding plans are but stepping stones in the desired direction. Their tasks are concrete, with practical schedules and budgets for immediate improvements. They are the milestones to reckon the distance covered; they are the goals and the bogeys by which to score the game. What do these records show thus far?

The first task, obviously, was to mobilize labor power and to increase its productivity. Accordingly, the adoption of the plan was preceded by preparations for the electrification of the country to provide the motive power for modern industry. The pre-war electrical output of Russia was 1,945 million k.w.h.; at the beginning of the Five Year Plan it was 3,507 million k.w.h.; and the 1930 output was already 8,231 million k.w.h., over four times the pre-war figure. And by the end of the second five-year period,[8] it is expected to produce a volume exceeding the production in the U. S. A.

The increase in number of wage earners was similarly rapid; the eleven millions in pre-war times were at the beginning of the Five Year Plan 11,400,000; in 1931, however, they reached 18,600,000 workers, with nearly twice the previous amount of mechanical power at their disposal. Correspondingly, the daily output per worker, expressed in terms of value, increased from 15.10 rubles in 1926 to 26.20 in 1930. At the same time the annual increase of value of production since 1927 has been 25, 24, 24, and 21 *per cent* for each successive year, while the number of depositors in savings banks has increased since 1923 from 500,000 to 12,700,000, with total deposits of 716,900,000 rubles.

Are the Russians Efficient?

Such are some of the attainments of a bold social "experiment." But what are the inside workings? Are Russians efficient?

When we compare governmental business and private enterprise, we natu-

[8] *New York Times*, March 5, 1932.

rally think in familiar terms, in familiar examples. Here is the inefficient municipal 8th Avenue Subway, and there is the efficient private Empire State Building. Yes, but there are also the very successful Hudson tube and the Washington Bridge as examples of state operation. We read in papers and hear over the radio so many stories of corrupt city and state officials, investigations, "rackets," gangs, kidnapings, *etc.*, in our own country that it seems to us almost inconceivable that the Soviet public servants are "on the level." In spite of all the vigilance of the secret service, the famous "GPU," and all the observations of foreign supply men, however, there is still no evidence that they are not honest.

Inefficiency and sabotage—Lincoln's famous "useless labor and idleness," which he hoped "to drive out of existence"—are heinous crimes in the Soviet Union. From time to time we read of blunders of shipping clerks consigning shoes all of one size to one community and all of another elsewhere. We read of plots to destroy large food supplies or disorganize production; we hear from visitors to the U.S.S.R. about three men doing the work done by one man in America. Such is the wide scope of manifestations of various forms of inefficiency to be found in the infant industry of the Soviet Union.

Yet we learn that hundreds of new factories and plants are being built there every year—some ahead of the schedule and even more quickly than they are built here—some comparable in size with the Gary, Indiana, and River Rouge plants. The explanation of this paradoxical state of affairs is obvious to any one familiar with the problems of management. To build a plant is one thing; to operate it efficiently, quite another. Men capable of designing and pushing ahead the construction are seldom, if ever, successful as production executives. Organized mass production is based on an entirely different technique. It has taken us over 40 years since the time of Taylor to develop and perfect what is termed scientific management, but even now how many American plants are operated efficiently?

Russia has just begun. Available executives are not only limited in number but they are lacking in experience. The examples of management and administration which they may see in Germany and England are unfit for imitation in the U.S.S.R., since European industry was created and is still being operated for comparatively small-scale production; Europe itself seeks now the counsel of American management engineers. But Soviet industry is calculated to run strictly on a mass-production basis. Such an organization is characterized by continuous processes, a steady flow of interchangeable manufactured parts into subassemblies and assemblies of the conveyor type. Such production is managed mostly by the exception principle, by the aid of careful charting of the progress, of the use of equipment and of personal efficiency; it is minutely scheduled through every stage of the process, carefully dispatched to each operation, and is based on minute planning and rigid specification of all activities. To install and to operate such an organization is a big order and it is unreasonable to expect that the Soviet executives could successfully conduct a young giant industry along these lines in such a short time.

It is true that the Russian worker is dead earnest about his job, that he is

fired with enthusiasm, that he is eager to learn, that he has nothing to fear, and that he considers himself the master of the situation; however, with the majority of workers, newcomers in industry and mostly straight from the primitive farms without any habits of industry, discipline is poor, skill negligible, sense of order, cleanliness and care practically absent. It will take a long time to develop the industrial habits so essential in a worker engaged in modern, power-driven, mass-producing, highly automatized industry; that is, to develop the three fundamental psychological traits: (1) sustained attention; (2) correct perception, and (3) quick reaction.

Handicaps to Efficient Management in Russia

It is almost impossible to realize to what extent the execution of our orders depends upon habit and tradition. As a matter of fact, most of the orders we give are so general that, if it were not for the fact that the clerks and the workers know what is wanted of them and how to carry them out, the orders never could be executed. In Russia, with this industrial background missing, every order must be elaborated in the minutest details, and the utmost care must be taken to ascertain that even then it is correctly understood and that the clerk or the worker really knows what his superior is talking about, to say nothing of whether he knows how to do it.

Few, if any, Russian executives and factory managers have had any engineering or executive experience in modern industry. Promoted to their responsible positions largely because of their integrity, loyalty, influence with the masses or revolutionary past, before they can efficiently organize and conduct the enterprise intrusted to them, they must learn many things, even those of which they do not yet suspect the existence. Under the circumstances they naturally shift individual responsibility, which the Government persistently tries to inculcate in them, and often hide themselves behind the skirts of endless committee meetings, mass meetings, *etc.* This, of course, does not help to get things done. At the same time, many of them distrust their own assistants and hesitate to delegate duties and functions to them, fearing responsibility for their improper execution. Hence, the executives are as a rule overburdened with a mass of inconsequential details. Besides, they often work overtime and exhaust themselves further by attending many night meetings, with the result that they are not in shape to act efficiently and to get action. Often they undertake sightseeing trips through the shops in the vague hope of discovering some waste and inefficiency that they can attempt to stamp out by mere edict.

The wage system in the U.S.S.R., being almost universally on a piece-rate basis, leads to further managerial tangles. Since the science and art of time studies and motion studies, to say nothing of micromotion studies, is a thing little known in the U.S.S.R., the common way to determine the necessary time is to find an average of actual repeated performances. Small wonder that some rates are 400 *per cent* in excess while some others are but 50 *per cent* of the reasonable time. What this means in the shop in disrupting schedules, in causing workers to dodge certain assignments, and subsequently in preventing a reduction of unit costs and increasing labor turnover, any one may readily imagine.

Faulty organization of maintenance and storeroom service are also frequent handicaps to the uninterrupted flow of production. As was the case in this country 20 years ago, few executives think of preventive maintenance of equipment, but wait until something goes wrong or breaks down and then start a hurry-up repair job. With inexperienced machine operators mishaps are frequent; in fact, I have seen machine shops with over 20 *per cent* of equipment under major and minor repair.

With raw-material delivery, the situation is likewise serious. Soviet railways are generally inadequate for the greatly increased load imposed on them by the rapid growth of industry, although they are carrying two or three times the volume of freight and passengers carried before the World War. Fuel, metals and semifinished materials are delivered irregularly, and the commercial directors are prone to overstock the plants as a matter of protection against interruptions. Since this is difficult to do under the régime of national planning, interruptions in the flow of production caused by shortage of materials are not infrequent. Meanwhile, in order to keep men and machinery busy, whatever work can be done is done, thus bringing about unbalanced conditions in the stores of finished and semifinished parts.

Last, but not least, a handicap in the management of Soviet plants is the embryonic state of factory planning and dispatching. Their planning usually stops where ours begins; that is, the engineering department prepares the list of materials and estimates the machine time needed, upon which the planning office figures the monthly work orders. All the really vital details of scheduling, dispatching, production control, progress records, *etc.*, are left mainly to chance and to the energies of "chasers."

Hence, an average Soviet factory is usually overridden by various investigating committees from headquarters —studying material shortages, labor rates, delayed production, excessive spoilage, high costs, and so on, sometimes wasting a great deal of time of the local executives.

Realizing these shortcomings only too clearly, the Russians stress the importance of what they call "rationalization"—a sort of "efficiency engineering" of a type in vogue here some years ago, devising jigs and writing alluring reports with estimates of tremendous savings. The higher-up Soviet officials clearly realize the gravity of the problem and work relentlessly to bring about improvements. One manager after another at various conferences of industrial executives has spoken in the vein of Mr. Bourukhin, who stated: "Reconstruction of industrial management is one of the foremost problems before us." At the conference held in June, 1931, Stalin made a speech in which he did not mince words. He said: "I think that it would be far better if our industrial managers, instead of devoting their time to speeches and curses, would settle down . . . to study all the details and 'trifles' in the organization of work, do away with irresponsibility right here on the spot and then spread the experience of their enterprise to other factories."[9]

Some of them did so. In my own experience, a director of one of the plants which I reorganized went on record as to results attained, reporting that, "In order to have before him a clear picture of running production

[9] *Izvestia*, July 5, 1931.

which will permit him to direct his attention where it is most needed, every director in industry must have chart records. The importance of Gantt charts is not appreciated by many executives, and that is too bad. The experience of our plant demonstrated their most important advantages . . . During 1930, the cost of production decreased 20 *per cent;* the use of tools was reduced 23 *per cent.* During one quarter—October 1, 1930, to January 1, 1931—the plant output was equal to the output for the entire year, 1929–30. For 1931, we accepted a program four times as large as that of the last year. The introduction of the Gantt charts alone produced an annual saving of one million rubles." Later on, the same machine shop reported an increase of production of 468 *per cent.*

Similarly, the well-advertised, large tractor plant at Stalingrad shows a healthy, steady growth of output. While in January, 1931, only 602 tractors were produced in this new plant, the December output of the same year was 2,725 tractors, and now their daily output is up to 130 tractors.

Conclusion

From such examples one may justly conclude that Russians learn quickly. But heretofore they have engaged foreign engineers specializing only in construction and equipment. The time has come to learn how to manage these new plants, central stations and railways efficiently. We all know that a large plant and perfect equipment is of no avail without competent management. Training their executives in the technique of management is the paramount task before Soviet industry today. Yet, we know only too well that industrial leaders are not trained in class rooms; that while the essentials of scientific management may be taught in colleges, technique and skill in its use comes only with years of experience under competent guidance.

But even when they bring their production to the maximum—and the improvement of transportation and economical and uninterrupted operation of their interconnected electrical central stations are in themselves major problems of management—the domestic needs of the population are so enormous, the growth of the local markets and rise of the standards of living so rapid, that the time when the Soviet Union can become our competitor is remote, if it ever does come.

Meanwhile, the Soviet's ambition is to "catch up and to overtake" our American standard of living; and "engineers," to use the words of an editorial of the American Society of Mechanical Engineers, "who have so effectively altered the mode of living of Western nations should be the last to complain of this form of competition. It should, rather, offer them a challenge, as present conditions do, to prove that their profession may benefit the entire world without the exploitation of some parts to the advantage of others."[10]

[10] *Mechanical Engineering*, November, 1930.

THE SOVIET ACCOUNTING AND CREDIT SYSTEMS

By BORIS PECKER

THE accounting system in Soviet Russia, like everything else, is different from the American or any of the European bookkeeping and accounting systems. Before the Revolution, Russian business men made little use of the newly developed accounting technique. If they maintained any records, it was either by the so-called "simple entry" or by the Continental bookkeeping system. Only banks and some of the large-scale industries kept their records under the modern double-entry bookkeeping system. Public accountants and outside auditors were not widely used to install systems and check business transactions. In fact, accounting as a specialized profession was practically unknown in Russia, while in England and America it had grown to be a vital factor in the efficient control and management of industrial enterprises. With the advent of Russia's industrial development, under the Soviet socialized economy, however, accountancy has suddenly become one of the most important state functions of the U.S.S.R.

Organization of Accounting in Russia, and Its Operations

Like the planning organs, under the Five Year Plan the accounting and statistical organizations exist in all branches of the Soviet system of administration. The structure of these accounting departments and their interrelationships are analogous to the structure and interrelations of the planning organs. Since national economic production and distribution take place according to a set plan, every phase of their process is recorded, compared, and analyzed. For everyone, from the common worker to the chief executive of an enterprise, figures and statistical tables carry a certain significance. They are religiously and carefully computed by the numerous clerks, bookkeepers and accountants who are charged with this great responsibility of "feeling the pulse of the Five Year Plan." It is, therefore, no wonder that all statistical and accounting work in the Soviet Union is carried on with a view to giving as much practical help as possible to economic and planning work. The importance of a close linking-up of economic planning and accounting is revealed by the fact that the Soviet Government has vested the State Planning Commission and the local planning departments with the duties of a central statistical board. Special accounting departments which supervise and control the recording of industrial operations throughout the country have been formed in both the central and the local planning bodies.

The continual operating results of the various enterprises are recorded and verified by two methods. The first method is what is called "conjuntural observation" of the daily actual execution of the established budget or plan. Every five or ten days, data are transmitted, usually by wire, by the operating enterprises to the head office to which they are subordinate. There the actual figures are

compared with the estimated figures and recorded on the proper uniform records. This comparative statement forms a basis upon which the central executive bodies observe how the plan is working and determine what decisions the situation calls for. The second method consists of complete periodic operating statements from all the state enterprises. The preparation of these statements is purely an accounting function. The various uses made of the accountant's report make it incumbent upon him to prepare up-to-date, complete, and reliable data which far surpass in comprehensiveness and analytical details any report an American accountant is called upon to submit.

Thus, during a short period of time Soviet Russia has been able not only to realize the importance of using accounting records in its industries but also to make them a paramount factor in its planned national economy. The need for better accounting systems and more skilled bookkeepers and accountants is becoming more acute from day to day. The reasons for this are obvious. The State controls, operates, and interferes in the most minute affairs of industry and commerce, and this results in a constant check upon all methods of record keeping and reporting. This is done to insure governmental control of all economic activities, to obtain correct statistics for the Five Year Plan, and to provide information for tax purposes.

Effects of Governmental Policy on Accounting Methods

Accounting in the Soviet Union, like all other professions, is controlled and regulated by the Government. The Russian accountant's functions are similar to those of an American internal revenue auditor. He is engaged or appointed by the Government to perform a certain specialized function. Since everything is predetermined and prescribed in the exhaustive instructions of controlling centers, the Russian accountant cannot use his own originality in any way. The central organs provide a uniform system of accounting and statistics for all their producing and distributing agencies constructed in an analogous way and operated by the same methods.

The balance-sheet and operating-statement forms are practically uniform throughout the Soviet Union. The work of the accountant is to compile the figures and insert them in the provided columns. The data of the financial statements must correctly display the results of business activities in strict compliance with the regulations promulgated by the central organs.

On analyzing the Soviet balance sheet we find a striking difference from our balance sheet. Since a socialized economy does not recognize profit as the primary aim of a concern's operations, the financial statement assumes a different aspect. The State has the same interest in its industries that a capitalist parent organization has in its operating branches. The correct application of the capital intrusted to them by the State is their particular care. Accumulation of profits is strictly limited by the State to suit its plans for national progress and welfare. The content of a Soviet balance sheet is confined to the required useful information for the various purposes for which it is being used.

Unlike the balance sheet of a private business, the Soviet balance sheet of a concern does not contain such assets as Real Estate, Goodwill, Franchises or any of the intangible assets. Since land is the property of the State, only

the acreage is shown on the balance sheet in a footnote, for statistical purposes. The products from the land, like oil, minerals, lumber, *etc.*, when actually removed from the soil and ready for sale, are shown as assets. Goodwill, franchises, or similar intangible assets have no value in a socialistic economy. Soviet balance sheets are very explicit and real. Only actual values at the disposal of the enterprise, and its obligations, are shown. For example:

Assets

(1) Material values under trust receipts and on assignments.
(2) Debtors for collateral securities.
(3) Notes Receivable, guaranties and other securities received as collateral on loans, *etc.*
(4) Leaseholds.

Liabilities

(1) Creditors (or depositors) per trust receipts or consignors.
(2) Collateral securities issued.
(3) Creditors, per *contra.*
(4) Owners of leased property.

In valuing the assets of the balance sheet, only actual cost is shown; the market price is never a basis of valuation. Depreciation of assets is not credited to the account but shown in a corresponding reserve. Book values are not written down or appreciated. When the Commissariat for Trade publishes certain fixed costs of assets, the rates of depreciation are established. The accountant, in setting up his reserves, uses the official depreciation rate named by the central organs. Every account which has become doubtful and useless is written off as a loss. Only real and valuable assets are shown on the balance sheet.

The most important item on the balance sheet is the Surplus Account. This account is subject to scrutiny and verification by the Commissariat for Trade and the Supreme Council for National Economy. For that reason the accountant takes special care to elucidate the various entries to this account. Many exhibits and schedules explaining each entry to the Surplus, as well as any account appearing on the balance sheet and operating statement, are prepared and attached to the report to show their exact significance.

The parties interested in the accountant's report are numerous. The Workmen's and Peasants' Inspection Commissariat is interested in the correct organization of business enterprises and in proper planning and budgeting. It acts like a general manager of a business. Before the figures are prepared, the inspectors check all the preliminary statistical data in every unit in order to insure economy in compliance with the rules and regulations laid down by the central authorities. By means of the comparative statements of actual and estimated results, the Commissariat controls and supervises the efficiency of the concerns and suggests means of curtailing the percentage of overhead and administrative expenses.

The People's Commissariat for Finance is directly interested in the final result of the operations of a concern. It makes a thorough analysis of the operating statement. It scrutinizes expenditures, depreciation charges, inventory losses and other items which offset the net profit. It is also concerned with correct turnover, which is subject to taxation, *etc.*

The head office, as well as the numerous statistical organs of the Supreme Economic Council are vitally concerned with the results of the current operations. They form the basis

for budgeting and planning which is characteristic of a socialized economy.

Recent Changes in Accounting Methods: Two Balance Sheets

Recently the Supreme Economic Council has instituted some reforms that have changed the appearance of the Soviet balance sheet and affected somewhat the accounting procedure. The single balance sheet has been split up into two balance sheets, namely the construction balance sheet and the exploitation balance sheet. Thus, the old balance sheet has lost that section which dealt with the creation of "Capital Assets." Certain other assets, as well as liabilities, have been transferred to the "construction balance sheet" to form a separate systematic accounting for the values intrusted to it for "creation" purposes.

The so-called "exploitation balance sheet," or operating balance sheet, consists of assets and liabilities reflecting the main activity of the enterprise—the production of goods and services or the distribution of them, as the case may be. All subsidiary departments and shops, power plants, transportation facilities, and all assets or liabilities which have nothing to do with construction, are left in the operating balance sheet.

The construction balance sheet consists of assets and liabilities which affect the construction or the improvement of the plant. It is quite independent of the operating balance sheet, but it has no capital account of its own. Instead it has a liability to the head office for all financing received therefrom to be accounted for. This liability account is usually called a "construction financing account." In fact, it is an Accounts Payable to the construction enterprise and an Accounts Receivable to the head office, which also maintains a construction balance sheet. There are, of course, other liabilities appearing on the construction balance sheet of the enterprise; among these is a regular current liability to the operating balance sheet for all values received by one from another. These two balance sheets are somewhat similar to our general and factory balance sheets or parent and subsidiary company balance sheets.

Thus Soviet Russia has separated its two main functions in its present economic stage of development. Since the same enterprise may be engaged in constructing new factories and equipping its plant and at the same time operating its facilities for production purposes, Soviet accountants have separated these two functions into two distinct balance sheets. For this purpose the head office—be it a trust, the central board of the whole branch of industry, or a small shop—in fact, any business enterprise which is engaged in construction work—must prepare two balance sheets, accurately recording thereon all the pertinent transactions and showing to the Government at any given moment the extent of construction in progress.

As soon as a building or a plant, or even a single structure, is ready to enter the exploitation body of an enterprise, the production account in the construction balance sheet is credited and an asset account called "Completed Features" is debited, to receive the value of such 'finished products." Further, upon receipt of the completed structure by the operating people, all formalities being over, there is a settlement performed by the enterprise. The "head-office construction-financing account" is then charged with the value of the structure in question and

the sum is cleared off the construction balance sheet of the enterprise. At the end of the fiscal year, all miscellaneous indebtedness of the construction balance sheet to the operating balance sheet is liquidated through the head office.

A purely constructive enterprise has, of course, only one balance sheet. The production or work in process is charged with the values of all material and equipment necessary to build up the structure. The settlement is made in the usual way, through the State Bank, and only construction balance sheets are maintained.

The journal entries required to record the entries from one balance sheet to another are of a simple nature. It is just a question of the accountant's understanding the nature of the entry, to ascertain what ledger account to debit or credit and to which balance sheet an account belongs.

The existence of two balance sheets for a single enterprise originally caused many complications. The most serious of them, and one which has caused the accountant many worries, was the preparation of yearly financial statements and the closing of the books. The trouble was that a construction enterprise had to close its fiscal year as of the first of January, whereas the operating enterprises prepared their yearly balance sheets as of the first of October. This fact prevented the balance sheets from being prepared simultaneously, and many inconveniences arose out of this conflict. But by the Decree of September 20, 1930, this discrepancy has been completely eliminated. The date of the financial year of the operating enterprises also was fixed to commence January 1. Thus, the two balance sheets can now be prepared and issued simultaneously on one sheet of paper in two adjoining columns.

This change of date for starting and closing the fiscal year involved another complication for the accountant. In order to make a comparison of the year 1931 with previous years, it was necessary to prepare on a calendar basis yearly statements for the previous years which had been on a fiscal basis. Accordingly the Supreme Council of National Economy issued a decree which provides for the preparation of three balance sheets, such as:

(1) For the fiscal period, October 1, 1929–September 30, 1930, the old business year.

(2) For the special quarter, October 1 to December 31, 1930. (The last quarter of the calendar year 1930 was ordered to be a special economic and accounting period with its own plans, estimates and balance sheets.)

(3) For the whole calendar year of 1930, beginning January 1 and ending December 31, 1930.

Soviet Russia is still in its metamorphic stage. It keeps changing its established systems whenever it is convenient and practicable to do so. The accounting system is now in its embryonic stages. It will undergo many changes before it is established on a sound and permanent foundation.

The Soviet Credit System

The credit system of the Soviet Union is unique in its structure and is characteristic of a socialistic national economy. Since the abolition of commercial credit and the gradual transition to direct bank credit, as a result of the reform of the credit system in 1930, financial planning has been raised to a new and higher level. The system is comparatively simple when compared with our complex and intricate credit structure and the Federal Reserve System of the United States of America. Accountants had some difficulty at

the beginning in adjusting themselves to the new credit reform, which, by doing away with the opening and keeping of current accounts, has eliminated the bill of exchange and has simplified the main business transactions between every two parties concerned. But after it had proved its utility and the enormous economy which it offered, the new credit system became the most welcome and the most convenient medium of recording the various interrelationships of the socialized industries. It eliminated the main accounting troubles in keeping, settling, and adjusting transactions that used to be recorded in Accounts Receivable and Payable, as well as Notes Receivable and Payable; it has practically done away with the "mutual-settlement account" between the head office and the enterprise, since all their financial transactions are now made through the bank only.

Bankers and credit men can realize the soundness of the Soviet credit system by comparing it with the muddled and intricate system of credit exchange that exists in capitalistic countries.

In a capitalistic economy, credit is a most important factor. More than 85% of all private businesses are done on a credit basis. Practically every business is a buyer of other people's goods and a seller of its own. Hence, to keep its financial condition at its best, it must grant credit to its customers and procure credit from those from whom it buys. The costs involved in maintaining a sound credit policy, and the losses from bad debts due to the looseness of the credit system, cause many businesses to go bankrupt.

Just visualize a credit system in which a central agency "clears" your credit in the same manner that the Credit Clearing House of New York and the Federal Reserve banks clear the balances between the member-banks. When you buy goods on credit, your trading account at the central credit exchange is credited with the amount of the invoices; when you make sales on credit, your account is debited. The only effort on your part would be to mail the supporting documents of the purchase and sale and to make periodic adjustment of the differences in your account. This would relieve a business from its financial worries, bad-debt losses, and the vast amount of work required to keep up the numerous accounts of receivables and payables.

In order to understand the Soviet credit system it is well to keep in mind the functions of our credit clearing houses, especially for those banks which are members of the Federal Reserve System. An industrial unit in the East has to pay for the coal for power, for the raw material of manufacture and for its labor. In return it receives payments for the products which it sends throughout the country. How are these transactions settled? There are two methods of procedure: (1) the debtor may send the payment to the creditor, or (2) the creditor may draw a draft on the debtor ordering him to pay. Both methods are usually followed. The common one is to send a personal check. This check when received by the creditor will be deposited in his bank, which will forward it to the clearing house or to a Federal Reserve bank for collection. The bank on which the check was drawn does not take out actual cash to pay it. The check will be paid by an automatic deduction from the balance maintained by the bank in the clearing house. If

its customers pay for their out-of-town purchases by sending personal checks, these checks will be sent to the clearing house for collection and will be paid by deductions from the balance of the local bank. Thus, conceivably, all the transactions between economic units are settled by entries on the books of the corresponding banks. The Gold Settlement Fund of each of the twelve Federal Reserve banks performs the same functions as the balances kept by members of the local clearing houses. The Federal Reserve banks and the direct-settling branches are connected with a private telegraph system, and debits and credits can be offset and balances paid by changes in the ownership of the gold in the Gold Settlement Fund. In magnitude, smoothness, and economy of operation this system is far superior to any other system in the world for settling the obligations of a wide territory.

The Soviet Credit System operates upon the same principles, but it affects mercantile credit as well as banking and public credit. The State Bank in the U.S.S.R. is the central financial institution of the entire Union of Soviet Republics. It is the focal point of economic connections, the central clearing house and the centralized cash reserve of socialized economy.

How the Credit System Works

The two fundamental tasks of the Soviet Credit System at present are: (1) to assist the development of national economy by means of credit, and (2) to introduce elements of sound finance into the economic relations of all its enterprises.

The manner in which each separate enterprise settles its accounts has been clearly defined by the Supreme Council of National Economy in a decree issued April 1, 1930. Under this regulation, all industrial as well as agricultural enterprises have been regrouped. Central offices of each particular line have been established, combining duties and functions of the regulating, supplying and selling bodies. Under this arrangement the central head offices of a certain economic unit have special departments which supply the individual enterprises with all the material and equipment needed, as well as disposing of the finished products which the enterprise produces.

The State Bank of the Soviet Union has signed special agreements with all the industrial central head offices, wherein it has been provided that the bank shall undertake:

(1) To settle the accounts between the enterprises and their head offices for the value of goods shipped to the latter or to their order;

(2) To settle the accounts between the enterprises and their head offices for the value of material and equipment supplied by the head offices to their enterprises;

(3) To settle the accounts between head offices and their customers (Soviet establishment only) for the value of goods sold to the latter;

(4) To pay head offices' debts for the purchases they make;

(5) To finance the head offices and their enterprises according to their operating and construction programs and financial plans.

Thus all the basic transactions of every enterprise and its head office are now being done without any bill-of-exchange or open-credit accounts. All those innumerable operations and accounting manipulations involved in the old credit system have been eliminated. Instead of the complex and intricate intercredit relationships, each enterprise pursues the following simple procedure.

As soon as the enterprise has shipped the goods according to the direction of the head office, it presents supporting documents, such as the bill of lading or shipping ticket, to the local branch of the State Bank. The local branch of the State Bank maintains a Current Account with each enterprise, which is debited with the value of goods received and credited with the value of goods shipped. Its operation is similar to that of the New York Credit Clearing House, but its functions are different. As soon as the local bank has received notice of the shipment of the goods, the particular enterprise's current account is immediately credited "as per invoice." The supporting documents of the shipment are then sent to the other branch of the Bank, where the particular head office of the enterprise is located. This latter branch of the State Bank charges the head-office Current Account with the shipment received. A notice of the charge, together with the supporting documents of the shipment, is mailed to the head office.

When the head office ships materials and equipment to its local enterprises, the reverse case takes place; *i. e.*, when the latter gets its shipment from the former, the whole procedure is repeated, but in the opposite direction—from head office to enterprise.

Not all transactions are carried on directly with the central head offices. Sometimes goods from the enterprise go directly to selling agencies or to the consumers, and materials and equipment are purchased and shipped from sources not connected with the central warehouses. All modern practices of through shipments direct from actual suppliers to actual consumers are maintained in all those cases where the central head office plays the part of an intermediary or of a regulating body. In those cases credits due to the selling organization, and charged to the purchasing enterprise, are made direct through local branch offices of the State Bank, and the head office gets a copy of the invoice for statistical purposes only.

Should any claim arise from these transactions, such as returned merchandise, defective goods or errors in shipments, such claim is subject to acceptance prior to its presentation to the bank for collection. When a claim is accepted, a reverse bookkeeping entry is made, after supporting documents have been approved.

From this brief explanation of the Soviet credit relationship, it seems that the State Bank becomes not only a "clearing house" but an actual comptroller of industrial affairs. It has to look after overdrafts and the timely fulfillment of the planned financial and production programs of every branch of Soviet industry. Also the State Bank supervises and audits the books of the many industrial enterprises; it analyzes their operating and construction plans, together with the balance sheets reflecting their financial position; it studies the nature of their assets, which are considered to belong to the Bank.

The Problem of Cost and Profit

Now about the question of cost and profit. In a socialized economy the problem of setting values and computing profits is of secondary consideration. When the central authorities insist upon cost figures, and press the importance of cost accounting to be maintained in every producing enterprise, they do so to exert every effort for efficiency and economy and

not to lower the cost value and increase their profits.

The manner in which certain economic units set the value of raw material and finished goods is usually on an arbitrary basis. For instance, the Supreme Council of National Economy provides in Act 1144 of April, 1930, for a so-called "settlement price" to be introduced in all transactions between an independent enterprise and its head office, instead of using actual cost which may or may not be known at the time of shipment. By an independent enterprise is meant one which has its own balance sheet and a current account with the local branch of the State Bank.

This "settlement price" is nothing more than an estimate arrived at, at the beginning of the fiscal period, by the budget prepared for the particular enterprise. The yearly budget is based upon past operations and upon the estimated cost according to current financial and operating plans of the enterprise. At the end of the fiscal year the difference between estimated and actual cost of the article produced forms either profit or loss, as the case may be. This difference is considered the production result and appears as the debit or credit balance of a special account called either "Order-execution Account" or Surplus or Deficit Account. The reason for naming this account "Order-execution Account" is due to the idea that all production is done only upon specific orders and plans, outlined by the head office and bearing the estimate or plan cost—the settlement price of the article.

When sales are made to the head office, the enterprise charges the head office with that "settlement price" and the value of the finished goods shipped. If, however, the sales are made to the customers direct, two prices and values are shown on the duplicate invoice forwarded through the bank to the head office—the "settlement" price and the selling value. The bank credits the enterprise with the selling value and debits the purchaser with the selling value. At the same time the difference between selling and "settlement" values is credited to the head office, through the appropriate branch office of the bank, and then is charged back to the enterprise. Thus, the difference accumulates in favor of the head office, making a sum of gross profit collected on local operations of the enterprise.

This simple method of exchange eliminates the commercial-credit system and the main items of monetary transactions. As explained, the purchases and sales are made without cash or bills of exchange. The checking account kept with the local bank usually does not exceed 1,000 rubles, the sum of money needed to pay labor, traveling expenses and other charges of a miscellaneous nature. Each enterprise, therefore, maintains two current accounts with its bank, one a checking account and the other a trading-exchange account. With these two accounts each independent unit regulates all financial and trading operations, thus simplifying the entire structure of the Soviet Credit System.

THE ECONOMIC SITUATION OF AUSTRIA[1]

By NICHOLAS KALDOR

THE present situation of the Danubian countries is generally attributed to two causes: (1) The breaking-up of the economic unity of the former Empire and the high protectionist policy of the Succession States, leading to a retrogression in the territorial division of labor; and (2) the world slump, causing a collapse of agricultural and raw-material prices. Both of these can be regarded as "exogeneous" factors. The one, at any rate, was entirely outside the circle of influence of the Danubian countries. The other—the creation of small territorial units—was a political or semipolitical one, which must have affected the economic system in a way similar to a fall in technical productivity, caused, *e.g.*, by earthquake or floods. The present situation is regarded merely as the totality of the effects of these external circumstances.

Inadequacy of the Usual Explanations of Austria's Plight

It is the purpose of the present paper to show that these two factors are insufficient to account for the state of disintegration which these countries have reached at present; and that, moreover, their condition can be adequately explained only by taking account of factors *inherent* in the economic system. In our view, the economic situation in these countries has deteriorated to a much greater extent than can be met by the mere adjustment to external factors; the excess is due to a lack of response in the system to the changes of data necessitating these downward adjustments. The situation is analogous to the case of an individual who, having experienced a diminution in his current income, on account of some outside cause, tries to keep up his previous standard of living by consuming his capital. But while the effects of such a policy are too obvious in the case of an individual to give much scope for theorizing, they have hitherto been neglected in the case of the community as a whole; in the latter case, of course, this phenomenon is both more difficult to detect and more complicated in its consequences. An examination of the development of the economic situation in the Danubian countries may, therefore, be of interest not only to the student of international affairs and the economic historian; similar phenomena may arise in all countries which for any reason are confronted with the necessity of a downward adjustment in their standard of living. The analysis may provide some clues, therefore, for a future theory of economic decline—a hitherto missing counterpoise to the theory of economic progress.

Among the Danubian countries, Austria was selected for our purpose,

[1] EDITORIAL NOTE: The collapse of the *Credit Anstalt* has been regarded as the straw which broke the back of the camel of international finance. The author has analyzed the situation further to show that the prevailing banking system of Austria obscured the basic fact that Austria was, even prior to 1929, living on its capital funds. Not only, therefore, does the economic situation of Austria become highly significant in relation to the world situation, but the method of analysis employed by the author in the case of Austria might, if applied to other countries as well, lead to equally interesting conclusions.

partly because, being an agricultural importer and an industrial exporter (whose exports, moreover, go largely to other industrial countries), she was benefited rather than injured by the fall in agricultural prices, changing the real ratio of international trade in her favor; and partly because the phenomenon to be investigated was both more marked and statistically more discernible in the case of Austria than in the case of other Danubian countries.

Only by analyzing the Austrian situation as it developed between 1925 and 1929, can one separate the purely internal disequilibrium from the international one; only in this way can certain internal factors, which in our opinion so much aggravate the present situation, be shown to have been operative even before the world slump came into existence. We shall examine the movements in both production and prices, and the changes in the cost of production in industry, in the value of industrial capital, in savings, and in the volume of consumption. We shall then attempt to derive our conclusions from divergencies in the movement of these indices; and, finally, the actual situation will be considered in the light of these conclusions.[2]

Indices of Production and Income in Austria

Estimates of the national income or the volume of industrial production are lacking in Austria, and there are no reliable indices of the changes in the number of workers engaged in the various industries. The available figures point to a slight increase in the industrial output between 1925 and 1929, an increase of the order of 6% to 8%.

The total number of the insured working population remained roughly constant (1.25 millions in 1925 and 1.31 millions in 1929, the increase being due mainly to changes in the method of computation), while the output per head has shown in general a small increase in the staple industries where it has been computable (with the one outstanding exception of coal mining, where it has been 40%), although it is not likely that the same rate of increase has been maintained in the finishing trades.[3] Agricultural production, which had roughly reached its pre-war level by 1925, has shown only a slight increase since that date (the total area under cultivation has remained unchanged, while the yield per acre has increased all around; in addition, a relatively larger increase has taken place in the production of sugar beets and dairy produce). Taken as a whole, the movements in the volume of production in Austria, as far as they are ascertainable from the data available, though they do not present the picture of a rapidly developing economy, are on the whole not unfavorable. They certainly do not afford the key to the general stagnation in the economic life of the country during these years, to the rising volume of unemployment and the steady volume of business

[2] We shall avoid, for the sake of brevity, making reference to the sources of our statistical material in each case separately. The figures given in the text have been collected from the *Bericht über die Ursachen der Wirtschaftlichen Schwierigkeiten Oesterreichs*, Redaktion der Wirtschaftskommission, Vienna, 1931; from various publications of the *Bundesamt für Statistik* and the *Oesterreichisches Institut für Konjunkturforschung*. A special reference will be made, however, in cases where figures were obtained from other sources.

[3] The index of production of the *Institut für Konjunkturforschung*, computed from 10 basic industries has been the following for 1927–1931: 100, 111.3, 114.3, 99.9, 87.8 (unfortunately no comparable data exist for the years prior to 1927).

failures, or to the downward tendency on the Stock Exchange.[4] In order to account for these phenomena we have to go below the surface and examine the relative movements of prices and costs.

Price and Cost Indices

The striking fact about the movement of wholesale prices is the discrepancy between the development of the prices of internationally traded goods and the prices of home-traded goods. The gap between the prices of raw materials and manufactured products, so noticeable in free-trade countries like England, has also occurred to some extent in Austria, but only because of the continuous downward trend in the prices of foreign raw materials. The prices of home-produced raw materials (these include pig iron, wood, aluminium, lignite, cement, and leather) have risen and were in 1929 some 8% above the level of 1925 (104.5% in 1930), while the price of imported raw materials has fallen to 78.6% (69.9% in 1930). Imported raw materials and internal raw materials show a price divergence of over 35% between 1925 and 1929. The prices of manufactured goods also rose by 4.5% between 1925 and 1929, and this rise was much stronger in industries using home-produced raw materials than in those utilizing foreign raw materials. It is difficult to find any explanation for this discrepancy other than the fact that the rise in the costs of production which affected the whole Austrian industry (a phenomenon with which we shall deal at some length later) manifested itself much more in the prices of the "sheltered trades" than in those of the export industries. The rise in the prices of home-traded goods was a result, therefore, neither of increasing business activity nor of any specific change in the distribution of internal demand, but mainly of the increase in costs, brought about by the unresisted claims made by the trade unions, the State, the municipalities and publicly owned enterprises, and fostered by the tariff policy of the Government and the credit policy of the banks.

There are no data publicly available from which the changes in the costs of production of industry can be estimated directly. There are, however, other data which enable us to draw very important conclusions.

We have seen that the volume of industrial and agricultural production of Austria, as far as it can be indirectly estimated, has not undergone any considerable changes since 1929. An appreciable change in the income or receipts of certain classes of the population can, therefore, be due only to changes in the opposite direction in other incomes. Theoretically, at any rate, a change of distribution need not necessarily mean a change in the money costs of production. But it will be generally admitted that if this change takes the form of increase in wages, in public revenue derived from indirect taxation, in railway and postage rates, and in the cost of social benefits, it will directly enter into costs. Among these factors, public expenditure

[4] Unemployment, despite the high world *Konjunktur* of 1927–1929, has been on the up-grade throughout the period, if persons above 60, the so-called "old-age pensioners," are included. The number of workers receiving benefit has increased from 20,000 in 1922 and 100,000 in 1925 to 230,000 in 1929, 280,000 in 1930 and 462,700 in December, 1931; in percentages of the total working population, for 1925–1931: 9.7, 14.1, 15.5, 15.8, 17.0, 21.7, and 27.3 have been unemployed on the average. The rise in unemployment has been much stronger in the country and in the agricultural districts than in Vienna, a phenomenon for which (considering the policy of high agricultural protection of the country) only the extensive building policy of the Viennese municipality can provide an explanation.

plays a considerable part. The receipts of public bodies (the Federal and the State Governments and the municipalities) rose from 1,421 million Austrian schillings in 1925 to 1,877 millions in 1929, an increase of 32%.[5] It would be a mistake, of course, to regard the whole of this sum—some 450 millions—as an increase in production costs. Some taxes yielded an increased revenue without an increase in the rate of taxation, *e.g.*, the tobacco monopoly. Some 50 millions were due to increase in income-tax receipts, and the income tax, in the short run at any rate, need not figure among the items of the production costs. Taking all the items of public revenue together, it is, nevertheless, safe to assume that a considerable part—about two-thirds—of the increase in public expenditure directly affected the costs of production of industry.

The second important factor is wages. There are no detailed statistics available from which movements in wages and labor earnings can be directly estimated over the whole of the industry. In some 50 industries, for which returns are given, wages increased without exception between 1925 and 1929; this increase amounted to anywhere between 8% and 40%. According to the Austrian Chamber of Workers (a semi-public organization controlled mainly by the Social Democratic Party and the Trade Unions), average money wages in Austria increased by 24% between 1925 and 1929. This is certainly to be regarded as an indisputed minimum; the actual increases in money wages have probably been still more considerable. Taking 45 Austrian schillings as an average weekly wage (a figure supported by the wage statistics published), the total wage bill of the Austrian industry amounted to some 2.5 billion schillings in 1925. The increase in wages that has since taken place must have caused a direct and additional burden on industry to the extent of some 700 to 800 million schillings a year.

The costs of social benefits rose from 258 millions to 383 millions between 1925 and 1929, out of which some 200 millions were paid by employers during the latter year. This sum covers only the cost of social insurance, while the sum paid by employers for employees' holidays and in the form of "final grants"—both of which are guaranteed by law for certain classes of employment—cannot be estimated statistically.

Finally, the freight rates of the railways had increased by some 15% since 1925, the receipts for freight having increased by some 86 millions. The charges of the Post Office had also increased by some 20%, causing an increase in receipts (partly a result of the increase in trade) of some hundred millions.

Was Austrian Industry Producing at a Net Loss?

In order to get a correct estimate of the effect of these factors on the costs of production, each industry ought to be examined separately. Owing to lack of material, however, all that can be done is to take the estimated money value of all these factors together and compare it with the output of the industry as a whole. The costs of production in industry and agriculture, owing to the increase in taxation, wages, social benefits, and freight rates, must have increased by some

[5] The tax burden of the present-day Austrian territory in 1913 is officially estimated at only 1,167 million schillings (in 1931 it was 2,013 millions).

1,000 to 1,200 million schillings a year.[6] The value of the industrial and agricultural output is estimated between 5,000 and 8,000 millions. According to the *Bundesamt für Statistik*, exports represent about 25% of the total output. On the basis of this figure, which cannot be far from the truth, the value of the total output would be some 6,500 to 7,000 millions. According to whether we take the lower or the higher figure, the average increase in costs amounted to 24 *per cent* or 12.5 *per cent.* There can be little doubt that even if the lower figure is the correct one, costs increased in a far greater degree than prices, and the difference is much greater than anything that might be accounted for by increases in industrial productivity. The prices of home-produced and home-traded goods (as we have seen on page 25) increased by some 4.5 *per cent* between 1925 and 1929 (the average increase for all home-produced goods is therefore considerably less, for the prices of export goods have not increased in proportion), while costs increased by at least 12.5 *per cent.*[7] Therefore, unless profits were unusually large previously, Austrian industry on the whole must have been working at a loss during the period previous to the world crisis.[8]

The Effect on the Value of Capital Investments

This conclusion becomes still more significant and convincing if the other side of the picture, the value of capital, is considered. As a general-loss régime implies that the volume of current consumption exceeds the value of the current output, the difference can be made up only if capital is consumed to a proportionate extent. Statistics of the value of share capital, of Austrian companies listed on the Vienna Stock Exchange, show that they diminished from 4,233 millions in 1913 to 1,291 millions in 1930 and 784 millions in October, 1931, despite the fact that over 1,900 millions represent new investments during the same period. (Of the latter, 747 millions fall under the period 1929–1930.)[9] The value of the share capital has diminished therefore by over 87 *per cent* since the outbreak of the War, and a considerable part of this diminution must have taken place after 1925. It cannot even be objected that the stock exchange quotations unduly underestimate the value of industrial capital. According to the

[6] This is also the estimate arrived at by the Austrian Commission on the Depression of Trade. *Cf. op. cit.*, p. 15.

[7] We have purposely chosen this figure, although the actual increase caused by the factors enumerated above must have in all probability exerted a much larger influence. There were other factors, however, with a counterbalancing effect, although this magnitude cannot be estimated in money terms: *e.g.*, the cost of short-term credit. The conditions on which Vienna banks have lent to first-rate customers were 13 *per cent* in 1925 and 6.5 *per cent* in 1929. If, however, the main conclusions of our analysis are correct, the effect of the diminution in interest rates were not so much the alleviation of industrial conditions but rather the postponement of necessary adjustments within particular industries and, indirectly, a contribution to the upward movement of other costs. The fall in interest rates after 1926 was caused solely by the fact that Austria was able to obtain foreign credit on more favorable terms.

[8] To avoid misunderstanding, this statement needs further elucidation. The word profits is used here in the ordinary business sense, meaning noncontractual incomes paid both for the use of capital and for entrepreneurial functions—the real surplus remaining after all expenses (including amortization quotas) have been provided for. The fact that the majority of industrial firms were paying dividends during the same period is itself no indication of profits earned; the real situation was veiled through insufficient provision for depreciation in the balance sheets.

[9] *Cf.* Oskar Morgenstern, "Kapital- und Kurswertänderungen der an der Wiener Börse notierten österreichischen Aktiengesellschaften, 1913 bis 1930," *Zeitschrift für Nationalökonomie*, Band III, Heft 2, December, 1931.

Bundesamt für Statistik, limited companies in Austria paid 1.1 *per cent* dividend on the value of their capital in 1929; the ruling money rates at the same time were 6 to 7 *per cent.*[10]

We may conclude therefore that (1) the remuneration of capital in post-war Austria was considerably lower than in other industrial countries and very much lower than the interest paid on short-term loans or even bank deposits; (2) the receipts from new issues, especially new issues of already existing companies (which make up the majority) were used not so much for investment as for the payment of dividends on the old shares; and (3) both these and the short-term credits absorbed by industry after 1925 were used up largely in covering current losses.

Why Did This Situation Develop in Austria?

These are serious conclusions, the consideration of which gives rise to a number of questions demanding explanation. First, if industry was working at a loss, how was it able to carry on at all? Who financed these losses and how were they financed? Secondly, if industrial leaders knew their own position, why did they agree to further increases in costs (wages and taxation)? Industrial losses usually occur because of sudden changes in prices to which costs cannot be adjusted simultaneously. In Austria, however, during the period we have considered, costs advanced rapidly and prices followed them up slowly; the increase in costs was the primary factor, and the problem arose from the necessity not of adapting costs, but of adapting prices; the losses were not due, therefore, to the "contract system" or to "rigidity of costs," factors by which similar phenomena were explained in other countries, *e.g.*, England.

Under free competition a situation such as that outlined above is unlikely to develop. No productive agent can permanently receive more than what is technically called its "marginal net product"; any attempt to obtain more than this is punished with unemployment, a restriction of supply, and such a rise in prices as permits the establishment of a new equilibrium. For a short period—so long as the existing capital equipment suffices to carry on production without requiring replacement—it is possible that some factors may receive more than their marginal net product and yet remain in employment. Since there can be no incentive to make any new investments in industry as long as the discrepancy between the ruling rates of interest and the actual yield of capital goods persists, however, the wear-and-tear of the more perishable parts of the equipment ought soon to put an end to such a situation.

In the case of Austria, however, not only do we lack any appreciable signs of deterioration in the physical capital equipment of industry, but there is evidence that very considerable sums have been newly invested during the same period.[11] Capital was, therefore,

[10] These figures also invalidate a possible objection to our previous conclusion that Austrian industry was working under a loss régime. It might be objected that the rise in money costs merely signifies that an income inflation has taken place following a previous profit inflation and that, therefore, the rise in costs is no proof of a general unprofitableness of industry. If that were the case, however, it would naturally have been accompanied by a stock-exchange boom, whereas actually, apart from a brief period in 1926–1927 (due to a fall in interest rates), there was a steady downward tendency in the price of shares.

[11] The long-term investments in industry since the currency stabilization must have amounted to some

continuously consumed and yet replenished; only thus can it be explained that the volume of production and employment were maintained and even increased despite the growing unprofitableness of enterprise.

The Austrian Banking Situation

Unless we assume that investors and capitalists were willingly dissipating their capital (in that case, however, capital consumption ought to have manifested itself in excessive dividends and a physical deterioration of plant), the explanation must be sought either in the ignorance of investors concerning their real position or in an excessive operation of the "calculus of vested interests." An analysis of the banking situation may account for the presence of both. If the supply of capital is completely centralized in the hands of banks—*i.e.*, if banks are both the owners of and the short-term lenders to industry, while individual investments take the form mainly of savings deposits—then, on the one hand, the supply of savings will continue to flow in the same channels so long as the confidence in the banks themselves remains unshaken, while, on the other hand, the banks might easily be faced with the necessity of keeping profitable undertakings in existence, even if doing so necessitated the advance of further capital. The closing-down of such a plant, and the consequent devaluation of capital, might endanger the position of the bank itself by diminishing the value of its assets, compelling it to write down not only the value of its long-term assets but, what is still more important, the amount of frozen credits.

Under such circumstances the financing of industry might easily become a vicious circle; every new credit granted generates further indebtedness, partly by increasing the debt burden and thus the costs of production of these firms, partly by increasing the force of those motives which led to the granting of the original loan.[12] No doubt such a situation cannot continue permanently, and the longer it goes on, the greater will be the disturbance connected with its liquidation. But so long as the banks can keep on increasing the total volume of resources at their disposal, and thus keep their liquidity unimpaired despite the growing volume of frozen credits, so long will self-interest, and not only mere force of inertia, tend to perpetuate and thus aggravate the situation.

The continuance and intensification of the "loss régime" is thus seen as a consequence of the peculiar nature of the Austrian banking system. This is a system under which commercial banks unite the functions of deposit banks, savings banks and financial houses, and own and control (directly or indirectly) more than 95 *per cent* of all industrial enterprises. The question naturally arises, how could such an

700 to 800 millions. The growth in the amount of short-term indebtedness is probably considerably greater.

[12] Some people might think that the short-term indebtedness of industrial undertakings cannot exceed the value of capital represented by that undertaking, for any credits exceeding this amount would be given "without security." This, however, is not true in cases where the short-term lenders are the same persons who own the capital invested. If banks in granting credits to industrial firms are guided by the principle of protecting their own assets, every new credit granted increases the amount of these "assets" and thus the motive of lending itself. In this way, the credits granted to them—theoretically, at any rate—can exceed several times the value represented by that undertaking. The only way banks can diminish the amount thus invested by them is by converting short-term debt into long-term obligations and selling the latter to the public. To some extent this took place in Austria in 1927 and 1928.

inherently unsound type of banking develop at all? The answer can be given only in terms of historical evolution.

The phenomenal development of the banks during the nineteenth century finds its explanation in the peculiar economic conditions of the country. Austria (and Hungary) underwent a rapid industrial development from the sixties, and the creation of capital within the country was not able to keep pace with the capital requirements of industry. Not only was the supply of savings insufficient, but savers had shown an excessive disinclination for risk bearing. Banks had to assume these functions and to give, so to speak, their own guaranty to every new undertaking. Similarly, the foreign capital flowing into Austria necessitated the existence of strong banking institutions; naturally, foreign creditors could not themselves survey the prospects of new undertakings. The type of banking which developed under these conditions[13] considerably accelerated the pace of development and insured that a much larger share of the total savings of the country was made available for *prima facie* "risky" undertakings than would otherwise have been the case. Moreover, it is probable that with the passing of the "industrial revolution," as the pace of development slowed down and the rate of saving owing to greater productivity increased, the Austrian banks would have succeeded in selling a large part of their industrial interests to the public and thus have transformed themselves into pure deposit banks. Austria, however, has never yet reached this stage. At the outbreak of the World War, the "industrial revolution" was still going on in various parts of the Monarchy; after the War, owing to the destruction of capital and the falling-off in savings during the inflation, industry became more dependent on the banks than ever.

So long as industry was developing and profits increasing, the weak sides of the Austrian type of banking did not come into the light of day. It is only in times of "depression," when large-scale adjustments become necessary, and when unprofitable plants have to be closed down and flexibility is required, that the unsound nature of the complete centralization in the supply of capital becomes manifest.

In the case of Austria, the true state of affairs was not realized even by the leaders of the banks themselves. This was partly a result of the system of centralized control within the individual banks, under which everything was settled in the head offices, so that it was impossible for the banks to survey the position of industrial enterprises to the same extent in each individual case as it is done, *e.g.*, by the branch managers of the banks in England. The industrial managers, on the other hand, being (at any rate, formally) "controlled" by the banks, never quite felt themselves responsible. Knowing that they could always rely on further credits from the banks and taking the line of least resistance, they preferred the requisition of further credits to the industrial disputes which are the inevitable corollary of any serious attempt to diminish costs. It was an unfortunate division of entrepreneurial functions that those who acted were not responsible and that those who were responsible lacked full knowledge of the facts.[14]

[13] The same applies *mutatis mutandis* to the German banking system, although the dependence of industry on the banks has never gone so far in that country as in Austria.

[14] There were other, noneconomic reasons for the apparent negligence in granting credits to industry.

Increasing Difficulty of Maintaining Bank Liquidity

It is clear that such a policy once embarked upon can cease only if (a) costs and prices are again brought into equilibrium, and thus the incentive to take further credits to finance current losses ceases; and (b) the financial resources of the banking system are exhausted, and the industries are thus compelled either to close down or to put their houses in order at a stroke.

As regards the first alternative, one has to bear in mind that the longer the process of "capital consumption" goes on, the greater will be the reduction of costs necessary to stop it. This is true partly because of the increasing burden of short-term indebtedness—a factor which can be eliminated only if a general breakdown of contracts takes place—and partly because, owing to the redistribution of incomes, the volume of current savings will diminish and the equilibrium rate of interest will rise.

As regards the second alternative, one has to remember that it must become increasingly difficult for the banks to preserve their liquidity under such conditions—even if we assume that the rate of savings, and thus the rate of increase in the total resources at their disposal, is maintained—because the amount by which they have to increase their loans every year in order to keep the system going becomes greater and greater.

If the main conclusions of our analysis are correct, then the continuance of the loss-régime in post-inflationary Austria must have presupposed a steady increase in the total volume of bank deposits. This, in fact, is borne out by the bank statistics of that period.

"Current accounts" of the principal commercial banks of Vienna increased from 1,500 millions in 1924 to 2,320

LIABILITIES OF AUSTRIAN CREDIT INSTITUTIONS
(In millions of Austrian schillings)

	1925	1926	1927	1928	1929
Total Liabilities					
(a) Commercial Banks	1,726	2,619	2,897	3,153	2,595
(b) State Credit Institutes	95	146	205	280	344
(c) Savings Banks	587	843	1,067	1,343	1,520
(a) and (c) together deducting the accounts of the Savings Banks with the Commercial Banks	2,662	3,539	3,949	4,481	4,200*
Deposit on Current Account with the principal Viennese Commercial Banks	1,649	2,062	2,192	2,320	1,829
Savings Deposits with the Commercial Banks and Savings Banks together†	620	960	1,261	1,579	1,725

* Approximate figure.
† Excluding the Post Office Savings Bank.

Banks, being the main if not the sole controllers of industry, felt themselves "socially" responsible for the maintenance of industrial undertakings, and thus of employment. Had the control of industry been divided among the many, no single entrepreneur would have felt the "social responsibility" falling on his shoulders when he was forced to diminish costs or to dismiss workers. The fact that banks as collective owners of industry did take such a viewpoint into consideration may seem an advantage, but only by leaving out of account that what they regarded as social interests were purely short-run considerations, necessitated by the force of a misguided public opinion.

millions in 1928; the drop in 1929 to 1,825 millions was caused solely by the elimination of the *Boden Credit Anstalt* in that year. The drop merely signifies, therefore, the writing-down of the bogus assets of one of the big banks and does not necessarily imply a diminution in the volume of liquid resources at their disposal. "Savings deposits" of commercial banks and savings banks together increased from 500 millions at the end of 1924 to 1,618 millions in December, 1929, and to 1,970 millions in May, 1931. The average yearly increase in savings deposits amounted, therefore, to some 230 millions. A considerable part of this increase, however, must have been caused by the fact that after the inflation period the public increasingly converted its holdings of industrial shares and bonds into savings deposits.[15] Taking account of this factor, it seems probable that the volume of real savings steadily diminished after 1926. This conclusion is also borne out by the fact that the increase in the volume of consumption (which amounted to 49 *per cent* in the case of Colonial goods, 14 *per cent* in flour, 52 *per cent* in potatoes, 16 *per cent* in tobacco and 19 *per cent* in sugar between 1925 and 1929) was very much greater than any possible increase in the national income; it must have been achieved, therefore, at the cost of saving.[16]

If the banks were able, nevertheless, to maintain their liquidity, it must have been because of an increasing inflow of foreign capital. Unfortunately it is impossible to find out the real magnitude of the flow of foreign funds into Austria. According to the Ministry of Finance, at the end of 1930, the long-term nongovernment foreign debt of Austria was about 700 millions, the state debt was 1,950 millions, while the short-term indebtedness was about 700 millions. It is probable that, except in the case of the state debt, these figures seriously underestimate the position.[17] Moreover, the fact that the foreign-exchange reserve of the Central Bank continuously increased right up to 1931,

[15] Savings deposits, as already mentioned, have always been the principal form of savings in Austria; it was only owing to the depreciation of currency that the purchase of industrial shares among the public assumed larger dimensions, these affording the only comparatively safe means for preserving wealth. In so far as the banks had to take over the shares sold by the public, the increase in deposits did not increase the amount of liquid resources at their disposal.

[16] We have been considering only that portion of the saving which has been effected through the banks. For reasons explained above, this is probably the greater portion of the total, although if one examines the statistics of new capital issues, the issue of municipal mortgage bonds, *etc.*, a different impression might be gained. A considerable portion of these, however, has been taken up by the banks and abroad. A more exact calculation of the value of annual new investments is lacking. The Austrian "Institut für Konjunkturforschung" calculates the "total capital supply" of the country as having been about 650 millions in 1924, 600 in 1925, 430 in 1926, 720 in 1927, 500 in 1928, and 400 in 1929. (The items of the total capital supply are composed of increase in savings deposits, external loans, new capital issues, municipal and mortgage bonds and internal loans.) Although these figures support our conclusions as to the diminution in saving (the increase in 1927 according to this estimate was mainly due to an increase in external loans from 50 to 300 millions), they probably overestimate the total, taking apparently no account of the double reckoning contained in taking the various items separately and adding them together; they underestimate, on the other hand, the volume of "external loans" (these are given as 20 millions in 1924, 220 in 1925, 50 in 1926, 300 in 1927, 15 in 1928 and 100 in 1929), and they do not seem to take account of corporate saving. It would be interesting, if it were possible, to find out how much the Austrian economy really needs to provide for the yearly rate of depreciation—which would throw more light onto the significance of these figures.

[17] The foreign obligations of the *Credit Anstalt*, for which the State has taken over the full guaranty, are not much less than the total of short-term foreign debt in the above calculation; this shows how seriously their real magnitude is underestimated.

despite an increasing adverse foreign-trade balance, shows that Austria was receiving foreign credit of considerable magnitude up to the *Credit Anstalt* affair.

The Cumulative Effect of Bank Mergers

Until the collapse of the *Credit Anstalt*, banks were able to increase continuously the volume of their lending to industry. There has been a series of bank failures since the stabilization era, but the situation has always been saved by the "amalgamating process"; *i.e.*, the banks which got into difficulties were taken over by other banks which themselves had to be "amalgamated" in turn. (The *Credit Anstalt*, after it had taken over the *Boden Credit Anstalt* in 1929, incorporated in itself three big banks and about a dozen smaller institutions.) In this way, the confidence of the public in the banking system as a whole was kept unimpaired; the necessity of industrial readjustment, which otherwise would have inevitably followed these bank failures, was avoided. The collapse of individual banks did not, therefore, remove the more deep-seated causes of economic deterioration. Owing to the "amalgamating process," the loss-régime of their industrial undertakings was not stopped thereby; on the contrary, its continuance was rather facilitated because, for the industrial enterprises involved, it meant the wiping out of old debts and the simultaneous making of new ones. When, however, finally the *Credit Anstalt* itself became insolvent, there was no bank left to take it over. Therefore, it was taken over by the State, and the burden of "financing" industry fell on the shoulders of the National Bank. At least, this is the inevitable impression one gets in studying the Austrian Central Bank's bill portfolio. The latter had risen from 89 millions at the end of April, 1931, to 528 millions at the end of June, 688 millions at the end of September, and 907 millions on December 31, and it is known that practically the whole increase was caused by bills discounted for the *Credit Anstalt*. While a considerable part of the increase in the early summer months must have been the result of capital withdrawals from the *Credit Anstalt*, there can be little doubt that the increase in the latter part of the year represented industrial credits.

It is too early as yet to judge how far the policy of the State in taking over the *Credit Anstalt*, and the policy of the National Bank in discounting its bills without limit, was unwise. No doubt the effects on industry of a breakdown of the credit-supply mechanism would have been very far-reaching; the necessity of adjustment, however, was not avoided but only deferred; and it is at least questionable whether the latter can be rendered any less difficult by being postponed any further. On the other hand, it is clear that the state and the national banks have thus involved themselves in obligations from which—unless very serious efforts are made, and made quickly, to restore the equilibrium of costs and prices—inflation can be the only way out, an inflation which will be accompanied by a rapid destruction of liquid capital.

Conclusion

We may possibly have overemphasized the rôle of the banking system in capital consumption. The emergence of this phenomenon is not necessarily dependent upon institutional peculiarities; the latter mainly determine the forms which it takes and—in the case of Austria—it was responsible for veiling

the situation from the authorities and from the public. Nor was capital consumption, even in Austria, confined to operations through the banks. The investments carried out by the municipalities and the State, in so far as they have led to the creation of capital goods of the wrong kind (investments which under the free working of economic forces would never have been undertaken out of the volumes of savings available), also represent one form of consuming capital, although the importance of these may be insignificant in comparison. Whatever form capital consumption does take in particular countries, however, it seems clear that once it has started it is apt to become cumulative. The force of the motives which originate it—the desire to maintain a standard of living out of proportion to productivity—is likely to increase, rather than diminish, by its progress.

It would go beyond the scope of this paper—which merely purports to throw light on one aspect of the Austrian or rather the Danubian problem, without, however, examining the situation in all its other aspects, especially the problem of exchange restrictions and international trade—to examine the various remedies which have been put forward in the light of these considerations, or even to put forward new ones. It should be noted, however, that in our view, any proposal which does not take into account these deeper-seated aspects of the Central European situation will fail to provide an effective remedy.

"FREE GOLD"

By C. REINOLD NOYES

IT will doubtless be generally agreed, by this time, that the advent of systems for the control or management of bank credit, in the United States and elsewhere, has curtailed if it has not eliminated the former "automatic" operation of the gold standard. The British objections to this change have seemed to us somewhat beside the mark since, after all, what we have done is to borrow in many respects the very system which they themselves developed during the half century before the World War. So long as the management was principally in their skillful hands and other countries were largely on the "automatic" basis, they succeeded in making the gold standard work fairly well. Now that the control is divided and the handling less adroit, it has not, so far, worked nearly so well. Nevertheless, the spread of "management" seems to have come to stay, and the solution of the difficulties which it has occasioned seems to call for constructive study rather than for destructive criticism.

From the standpoint of the United States it is necessary to accept the fact that, so long as the lion's share of its business is domestic, its gold policy will necessarily be determined largely in the interests of home rather than of international trade and finance. But since it is impossible in the modern world for a country in our position to deal with these matters without repercussions abroad, or in turn to remain independent of foreign influences, the difficulties with which a primarily nationalistic policy is confronted are inherent in the situation. Therefore, the best that can be done to satisfy the internal interests of our own country, as well as the interests of the world at large, is to find some basis for separating the intranational from the international systems so far as is possible.

Control of Credit versus Gold Flows

The effort to sterilize the gold imports of the period 1922–1925, by substituting gold certificates for Federal Reserve notes in circulation, while it necessarily failed of its object, testifies to the official desire, which then first began to appear, to render our internal credit structure immune to the "automatic" effect of gold movements. Indirectly one may say the same of the latest move, the Glass-Steagall Act. Its underlying purpose is to render possible, under the new conditions, the substitution of reserve credit for gold and thus, in case of emergency exportation of the latter, to avoid a compulsory contraction of credit. Another confirmation of this policy was the fact that, during the experiment of 1927–1928, the induced gold exports were fully offset by expansion of reserve credit. Moreover, all these actions conformed with the general doctrine advocated for England by Keynes in his *Monetary Reform*, though the means required in our situation have not been so radical. In general it is well recognized that we have adopted a policy of immunization from the effects of gold movements which is clearly in line with some of the weightiest authority in modern monetary science.

However, this policy presents a problem which has perhaps not yet been

squarely met. As the writer has shown elsewhere,[1] the entire expansion of bank credit in the United States during the last decade was crowded into the three years of relative depression, 1922, 1924, and 1927. This result was secured by reduction of rediscount rate and by manipulation of reserve credit. But the effect each time was to inaugurate a large-scale movement of our funds abroad and a moderate reduction in the rate of foreign investment here. Theory to the contrary notwithstanding, no correlation appears to have existed during that decade between such movements of capital export and increments in the export of goods. But in the year after each of these capital movements there developed what were, for that period, the three most marked increases in imports—increases principally of crude and semimanufactured materials. It would seem, then, that the primary effect of these efforts to encourage business by credit expansion has been to induce a large immediate export or withdrawal of capital, while the effect on domestic business—if we may regard our imports as an index of that—has been secondary and deferred.

Accompanying or immediately following two of these marked increases in the export of capital occurred the only notable movements of gold out of the country during the decade, involving the loss of about 180 millions of dollars from November, 1924, to March, 1925, and of about 500 millions of dollars from May, 1927, to June, 1928. Thus, on these two occasions, the effect of the only prolonged periods of extremely low rediscount rates prior to 1930 was to drain off the major portion of the expanded bank credit from the domestic field and to require later, in order to protect the gold reserve, a checking of the expansion by a rise of rates. Finally, in 1930, the third period of markedly low rediscount rates, though it did not induce gold exports, nevertheless seems to have resulted in an extraordinary direct movement of credit by American banks into the form of deposits in foreign banks, and thus into foreign money markets, a sign, at least, of redundant credit here. These incidents are evidence of the dilemma facing the effort to improve domestic business by management of money. And, conversely, in 1929, we saw that the attempt to restrain wild speculation by means of high interest rates was rendered nugatory, in part by the very fact that these high rates attracted an inflow of foreign funds. Control in the domestic interest, exercised for purposes either of encouragement or of restraint, seems to be partially negatived by induced movements of international capital in both directions.

International "Runs"

A third factor in the problem, which has only recently come to the fore, is presented by the vastly increased hazard in post-war international finance, created by the volume and movements of the mercurial something which we call "liquid capital." The new uses of the gold-exchange standard have imposed upon the reserves of a few countries a double liability. Two credit structures, domestic and foreign, are built upon one gold base. These foreign *devisen*, combined with the far larger scale upon which the surplus funds of banks and individuals have been moving for temporary investment or speculation from country to country, have behaved as if the

[1] "The Gold Inflation in the United States," xx *American Economic Review* 2, June, 1930, p. 181.

whole banking system of a nation were a single international bank—deposit or central—and the system as a whole has been subjected to the risk of sudden withdrawals running into hundreds of millions of dollars.

It is true, perhaps, that the difficulties which faced Germany last year were fundamentally due to the impracticabilities of the reparations settlements, and that the situation of England had been rendered more precarious by a return to the gold standard at too high a valuation for sterling and by an unbalanced budget. But no such conditions warranted the "run" on the United States. Actually the whole process started with the collapse of the Austrian *Credit Anstalt*, proceeded to the German banks which were heavily involved therein, and thence to the British and American banking systems because they in turn were involved in Germany. There was not much French money in Germany, and the Dutch and Swiss banks had succeeded in withdrawing most of their funds in advance.[2] But the panicky withdrawals from England and the United States came largely from these three sources. Like the earlier flights of capital from France and Germany, in the fear of inflation, such rapid large-scale movements constitute an almost impossible strain on the exchanges and thence upon the gold reserves, though the banking system in its internal dealings may remain intact. It matters not to what extent the nation subject to the "run" is also a creditor abroad, for the credits are in different private hands from the debits and the very stampede tends to make the credits unavailable. England, the world's chief creditor, could not mobilize her foreign assets in the emergency —nor could we. And this only to a small extent, for the reason that our funds in Germany were frozen. In the end the United States was the only country strong enough to stand the strain. There was but one reason: we could spare and did spare enough gold to satisfy the demand. We shipped or earmarked, in two months, 700 millions or almost as much gold as there was in the entire British stock at that time. And when, in the spring, the "run" was renewed, we surrendered another 400 million without flinching.

Repatriation of liquid capital has already taken place on a huge scale. The residue of the accumulation of foreign exchange which the Bank of France acquired, with the return from the French flight of capital, is now largely earmarked or withdrawn. The gold-exchange standard is not so popular, and its resurgence is hardly likely. Nevertheless, the world is getting smaller; certain countries have a surplus of funds which they cannot lend or invest at home and will not at present lend or invest abroad; and this desire for liquidity will continue for years to come. Therefore, this pool of the world's mobile liquid capital is likely to venture abroad again, and it seems evident that in this era we must be prepared for a recurrence of these sudden upsetting movements, provoked by every political or economic crisis, as an inherent element in the new international banking.

The Technical "Free Gold" Reserve

Obviously these are the three pressing requirements of a gold policy designed to render the intranational credit system as independent as possible of adverse international influences: that of neutralizing the effect of gold

[2] See the first report of the Wiggin Committee.

movements upon domestic credit; that of controlling the expansion and contraction of domestic credit without having the control negatived by induced movements to or from abroad; and that of guarding against, or being prepared always to meet, a foreign "run." All these purposes can be served and, under the present form of the gold standard and of international settlements, can be served only by a large surplus reserve of gold or of foreign gold balances; so large that it can absorb major inflows and outflows without effect or even serious threat of effect on the domestic credit structure and can permit the demand for exchange both ways, created by discrepancies of interest rates and of prices or by fear, to satisfy or exhaust itself. Certain proposals recently discussed seem to look in the direction of an actual segregation of this surplus gold reserve, a voluntary earmarking, as a sort of shock-absorber at our financial boundaries. But no such segregation is possible under the gold standard. All movements of gold, other than conversions by central banks of *devisen* into gold and *vice versa*, necessarily involve a change in the reserve in individual banks, must affect the volume of credit directly, and can be offset only by reciprocal changes in the volume of the credit portion of the reserve base. In other words, we already have the necessary and only possible apparatus in the permissive interchangeability of gold or credit within that portion of the central reserve which exceeds the legal minimum. In so far as this portion consists of gold, it is *surplus* gold reserve.

In theory almost the entire stock of gold in the country, in excess of 40% of Federal Reserve notes in circulation and of 35% of member banks' reserve deposits, is supposed to be capable of being regarded as surplus and unused gold reserve. This would seem to be the surplus "gold stock." Of the part of this surplus which is actually held in the Federal Reserve System, a certain limited portion has already been labeled "free gold." In practice it should be recognized that this limited "free gold" is the only true reserve of the banking system, for only that portion of the whole can move into circulation or abroad without affecting the structure of bank credit; all that is necessary is the substitution of an equal amount of reserve credit. Actually such gold is almost never withdrawn into domestic circulation. In these days practically all such withdrawals take the form of domestic currency. The real use of the "free gold" is therefore almost wholly that of a reserve against foreign liabilities—a corresponding international currency to be withdrawn only into international circulation.[3] To be sure, it may be necessary to increase the quantity of used gold at the expense of "free gold" if either the note circulation or the member-bank reserves require to be increased, and *vice versa*. And it may be necessary to use the same process to offset flows of Federal Reserve notes into or out of circulation in order to prevent their affecting member-bank reserves. Finally, in emergencies it is permitted to dispense temporarily with any part of the used gold subject to graduated taxation—a permission which has never been used. But in static conditions, the "free gold" is the only true reserve. It is entirely

[3] Somewhat similar is the reserve of notes in the Banking Department of the Bank of England which is referred to in the McMillan report (p. 30) as "in effect the measure of the maximum amount of gold which the Bank could part with in the absence of a change in the volume of notes in circulation."

available, and it is practically useful, only for meeting foreign withdrawals.

When we come to examine the situation more closely we find that there are a number of important discrepancies between the theoretical surplus of the gold stock and this item of "free gold," the true central-banking reserve. In the first place, the reserve against Federal Reserve notes must at present be figured upon the quantity issued by Federal Reserve agents to the Reserve banks, not upon the quantity in circulation only. Thus the Reserve banks are required to hold a reserve against some of their assets as well as against all their liabilities. At the time of the statement shown below, this excess, together with a small quantity of notes of one bank held for redemption by others, amounted to 412 millions. In the second place, the Reserve banks are required to deposit a 5% redemption fund in gold against such portion of their note issues as are collateraled by paper. The effect of this is to raise the actual minimum gold-reserve requirement of tax-free issues to 43%.

Finally, there is the question of an adequate supply of eligible paper. While other assets corresponding to the remaining 65% of member-bank reserve deposits could consist of any permitted assets, this has not been true until recently as to the remaining 57% of the reserve notes issued. As to this portion of their assets the banks were restricted to eligible paper (rediscounts and bills). Thus, in times past, the issues of Federal Reserve notes have frequently been covered almost wholly by gold, *in default of* sufficient holdings of such eligible paper. This situation has been rectified in part by the Glass-Steagall Act. But there still remains this curious situation. "Free gold," as computed for instance by Dr. Burgess of the Federal Reserve Bank of New York, does not represent the true capacity of the Reserve System to emit gold without altering the circulation or the basis of bank credit. In times when Reserve credit is contracted, the "free-gold" item will appear far less than the amount of surplus gold in the system—that is, far less than the difference between the reserve ratio times total liabilities and the sum of 43% of reserve notes and 35% of member-bank deposits. There may be some advantage in this, since it avoids advertising the unused capacity for credit expansion at times when it is not needed. But the fact remains that this technical "free gold" is like the widow's cruse. As quickly as "free gold" is exported and offset by expansion of Reserve credit, the supply is replenished, for then Reserve credit (in emergencies in all three forms) may be substituted for gold which, until then, could not be freed. And, unlike the cruse, the process works also in reverse.

Presenting the True "Free Gold"

The true gold reserve of the Reserve System, which can be made available by the action of the banks and the Board without altering circulation or bank credit, is the difference between the reserve of gold and lawful money in the system and the sum of 43% of Federal Reserve note circulation plus 35% of total deposits. This is at least the *potential* "free gold." It is possible for the Reserve banks to release practically all of it by substitution of eligible paper or government securities and by reducing the supply of notes in their own hands. For most purposes it would be preferable to reserve for this difference the title of "free gold."

Even at the present writing, and after the second recent outward movement of gold, this "free-gold" reserve, assignable against foreign liabilities, is still half as large as that which we are holding for domestic purposes. But the manner in which it is presented in the statements of condition of the Reserve System does not make the fact evident in such a way as to inspire confidence abroad and to remove the fear at home occasioned by relatively small exports. If the summarized statements showed the size of the surplus as a separate figure—a gold reserve against foreign liabilities—the true situation would be far better understood. Taking as a representative sample the Federal Reserve statement for February 28, 1929, and simplifying it by leaving out extraneous items, the showing along these lines would have appeared as follows (in millions of dollars):

Gold, Foreign Reserve	1,320
Domestic Reserve	1,350
Other Domestic Reserve	150
Reserve Credit (Ratio 70%)	1,510
Member Bank Reserves and other Deposits (Reserve required, 840)	2,400
Federal Reserve Notes (in circulation) (Reserve required, 660)	1,660

If now, for instance, 670 millions in gold were exported and neutralized, the statement would show (in millions of dollars):

Gold, Foreign Reserve	650
Domestic Reserve	1,350
Other Domestic Reserve	150
Reserve Credit (Ratio 53%)	2,180
Member Bank Reserves and other Deposits	2,400
Federal Reserve Notes(in circulation)	1,660

Or if 630 millions in gold were imported and neutralized, the statement would appear (in millions of dollars):

Gold, Foreign Reserve	1,950
Domestic Reserve	1,350
Other Domestic Reserve	150
Reserve Credit (Ratio 85%)	880
Member Bank Reserves and other Deposits	2,400
Federal Reserve Notes (in circulation)	1,660

Mobilizing Extra Reserve into "Free Gold"

But the discrepancies between the true surplus gold stock and the technical "free gold" do not end with the Reserve System. For we find further that, although the gold reserve in the Federal Reserve System thus showed a surplus of 1,320 million dollars over domestic requirements in February, 1929, this by no means represented the true measure of strength of our gold basis. At that time there was additional gold in the country outside the Reserve System, amounting to 1,468 millions, which, if it could all be freed, would make a total surplus gold stock of almost 2,800 millions. This extra-reserve gold consisted of coin and bullion held in the Treasury against gold certificates in circulation, which amounted to 935 millions; the reserve in the Treasury against United States notes, which amounted to 156 millions; and gold coin in circulation, which, according to the current but doubtful estimates, amounted to 377 millions.

At the present writing the aggregate of this potential surplus gold stock in the United States is still nearly 2,200 millions, or almost one-fifth of the world's monetary supply. The larger part of this—the portion which is outside the Federal Reserve banks—is serving no necessary purpose either to us or to anyone else. It is not available as reserve and it is as inert in its effect on credit and prices as if it had been returned to the mines and buried again in the ground. It represents the equivalent of three or four years' total production practically abstracted from the world's stock—and this at a time when it is claimed by many that the world is starving for gold. If the claim is warranted, we may justly be criticized

for using a great part of our stock in a most extravagant manner. Today no other country has important quantities in circulation, and most of the rest of the world has been economizing on gold to the utmost. We, on the contrary, have, during the past eighteen years, stocked our new central-banking system entirely from imports of gold at the expense of the other nations or by absorbing the new production, and have still retained almost completely the now obsolete gold or gold-equivalent currency which, in the days before the Federal Reserve System had been inaugurated, constituted the real reserve of our banking system. The day of gilded currency has passed, and it is time to recognize gold as a replaced mechanism and to dismantle it.

This is surely the occasion for the United States to break away from the remnants of its antiquated use of, and passive policy with reference to, gold. On the one hand, we are impelled by a negative consideration. We have faced the pressure of demand upon us for huge exports of gold during the "*crise de confiance*" and have found ourselves, in spite of possessing over 40% of the world supply, not too well prepared to meet the demand. The machinery for mobilization has grown rusty from little use, and much of the stock is where we cannot put our hands on it in time of need. On the other hand, we should be moved by a positive consideration as well. It is clear that, so far as the theoretical gold mechanism holds good, we have the power, by means of a bold and constructive gold policy, to start the world economy going again. The first step by way of preparation is to marshal our huge total of gold resources so that it is all available and effective. To this end three changes are necessary.

The first change needed is to withdraw gold certificates from circulation. This was done from the time of our entry into the War until 1922. But, thereafter, under the delusion that gold imports were thus sterilized, and on the supposition that it would serve as a secondary reserve, nearly a billion dollars' worth of gold in this form was restored to circulation. Now we have found that, far from constituting a secondary reserve, this gold cannot readily be reached in time of trouble. The device has failed to realize either of its objectives. The most obvious, logical, and economical substitute for this gold circulation is the remaining margin of unissued national bank notes, the amount of which happens to correspond almost exactly to the recent level of gold certificate circulation. The present law permits the issuance of these notes up to the aggregate of the capital of national banks. This aggregate is approximately 1,700 million dollars, while the present national-bank-note circulation is about 700 million dollars. An additional issue of government bonds with circulation privilege would thus not only provide for that amount of government financing at the lowest possible rate (probably 1½% net), but would free practically the whole of the gold involved, whereas substitution of Federal Reserve notes would free but 60% at best. Provision for the elasticity of the currency would still be covered by the ample margin of Federal Reserve notes in circulation. And, as for the old objection to bond-secured currency, we must be alive to the fact that government securities have now become the premier holding of the banking system. Such an arrangement would correspond closely to the enlargement of the fiduciary issue of the Bank of

England in 1928. With the return of normal conditions and of currency from hoarding, the organization of our hand-to-hand money would be left as before, except that the item of gold certificates would be absent and that of national-bank notes would have risen from 700 millions to 1,700 millions, or to about the same figure as that of the Federal Reserve notes. And this, I believe, would be a half-way step in the future modernization of our currency system. In this country where currency is, in normal times, merely an accessory to the principal circulating medium and, in times of panic, merely adds the function of a substitute for deposits in those particular banks whose solvency is suspected, there is no sound reason that the relation of currency to gold should be more intimate than is that of demand deposits in general. In the end we may come to a double circulating medium—demand deposits of individual banks and notes of the banks in general—both parts of which would bear the same relation to gold.[4]

A simplification and rationalization of the currency would be accomplished by the retirement of that relic of "greenback" days, the 346 million of United States notes, and the release of the gold cover in the Treasury which is held against these notes, amounting to approximately 156 million dollars. But no net increase in "free gold" would result, unless some currency without gold reserve were introduced in the place of these notes. As a matter of fact, a considerable portion of these legal-tender notes are now substituting for gold in the Reserve System so that, if they were replaced by additional Federal Reserve notes, there would be a slight reduction in the surplus stock of gold. Finally, the discontinuance of gold coinage and our conversion to the gold-bullion school, while it might present certain legal difficulties, would be decidedly in line with monetary progress. This would withdraw from circulation a further quantity of gold of uncertain amount, but something more than 400 million dollars, and would thus add approximately 250 millions net to "free gold." While such a wholesale program for the assembly of our total gold resources is on its face a counsel of perfection, perhaps not fully realizable, it seems to be worth while to suggest it in full. So far as the substitution of national-bank notes for gold certificates is concerned, this seems to the writer a matter of immediate importance.

Problems of Our Future Gold Policy

Such a mobilization of our gold is an essential preliminary to the courageous and positive policy by means of which the United States should take the lead in reviving world business and in restoring the gold standard. With this armory it is evident that we are equipped with so large a margin of safety that fear as to the dollar, either at home or abroad, is quite ridiculous. It is only necessary for us to display the true facts, and to be prepared to "go the limit," in order to quiet all misgivings. It is only necessary to make our whole surplus gold reserve "face out"—a requirement of the new times which could not have been foreseen when the Federal Reserve System was designed. The change would necessarily require some time for completion and could not, in any case, achieve its final goal until the remaining gold and gold certificates, described as being "in

[4] Since this was written, the so-called Glass-Borah Amendment to the Home Loan Bank Act has put this proposal into effect on a modified and temporary basis.

circulation," came out of hoarding. But, in the meantime, in the course of the mobilization there would result a considerable substitution of new currency and later of gold for present reserve credit. This would gradually ease the domestic credit situation and thus lead to a business revival at home. As it did so, it would prepare the road for a deliberate program looking toward the export of a considerable portion of this newly released surplus supply designed to effect a cure of the anaemia in other lands.

It seems more than probable that this depression, like that of the "seventies," is a reflection of the essential but painful process of readjustment in the relative levels of prices as between the nations to fit the new alignment of creditor and debtor positions; this process during the post-war period was valiantly fought, but only postponed and enhanced in its severity by the temporary means of granting credit—or deferred payments—on the international balances which had been and were being created on a huge scale. If that is true, we may expect to see ourselves emerging from this depression with an adverse balance of trade, at least until the growth of a healthy export of capital—for purposes so sound and productive that it will yield income for its own service and produce economies which automatically meet the "transfer problem" created by its service—permits for the time being the financing of an export surplus again. But, in the meantime, it is most likely that our own and world-wide prosperity can most speedily be restored if we invite rather than resist the adverse balance of trade which seems to be the inevitable result of irresistible economic forces growing out of the present situation. Both parts of this program, the easy-money policy and the expanding imports, have in the past decade involved some exportation of gold. They will probably produce the same effect again.

To prepare for this feature of the convalescence, so as to permit and to cover occasional excesses in a presently unfavorable balance of trade; to protect ourselves against possible emergency withdrawals in the meantime; and finally to make ready against the day when, with a return of world credit, our money markets may again be thrown open to the foreign borrowers and our export trade be thus stimulated; these are the three immediate and special purposes for which we need to mobilize our gold and put it to work. Such a mobilization is, in the first place, a matter of self-protection. It is also the certain fundamental element in any program for revival of world business, a program which must begin at home. It is the essential preliminary to the restoration of the functioning of the gold standard, whether with or without the cooperation of France, the other chief gold hoarder. Enlightened self-interest must compel us to attend to this issue. Under present conditions, since nearly half the world's stock of the metal is *hoarded* or *unused* in two countries, we must face the possibility that necessity is in process of mothering the invention of a substitute. The pound sterling, perhaps to be devalued, is by way of becoming a permanent substitute for gold. This is not impossible. For it is beginning to appear that credit banking, with only a nominal connection with gold, can be made to work as efficiently in the international sphere as we have already made it work in the national. The chief spokesman for the "release of the pound sterling,"

as it is euphemistically called in England, is already claiming greater stability for that standard. "It would be truer to say that gold went off sterling than that sterling went off gold. A point came when the inherent stability of sterling prevented it from following any longer the crazy antics of gold . . . Then at last we found it unavoidable to step off onto firmer earth."[5]

In the last analysis our problem is, therefore, not merely to keep gold in international circulation so as to preserve the value and utility of our huge hoard; it is to keep the dollar in international circulation. While some of the first steps of our latest infant industry, international banking, made in a burst of youthful and exuberant enthusiasm, have been unfortunate in their outcome and misguided in the larger aspects of financial policy, commercial credit in dollars has in the main passed through the ordeal with flying colors. Therefore, in the expansion of the bill market lies the immediate road ahead. Later, with a chastened and more practiced financial center, we shall in time undertake again to fulfill our natural destiny in the field of international investment banking. Sir Josiah Stamp said recently, in his Halley Stewart lecture, "In certain money markets there is neither knowledge nor 'guts,' for it is no good being extremely courageous one day and taking a lot of business, and then a few days later getting frightened by something, and trying to sell the bills and bonds at a huge discount. That is not the way to secure a world position in this kind of business. So, unless sterling remains very unreliable for a long period, long enough for other people to acquire the knowledge and calmness and equanimity necessary for such business, sterling will remain the chief currency of the world." One may agree with his hardly disguised criticism of our money market without agreeing with his conclusion. Certainly we are not going to charge off our expensive experience and give up the position we have already won. Instead, our course will be to profit by our mistakes and to seek by means of financial statesmanship to maintain and enlarge our proper place in world banking. We stand today as the only great nation that has, during the last two decades, maintained the international value of its currency intact—the only repository in which no foreign depositor has taken a loss.[6] Surely this fact makes our opportunity unique. The mobilization of our entire surplus gold resources into the form of "free gold" is the necessary foundation for this future.

[5] Keynes, J. M., "The Prospects of the Sterling Exchange," XXI *Yale Review* 3, March, 1932, p. 433.

[6] Our relative preparedness for this function is well demonstrated by a comparison between the short-time foreign liabilities and the "free gold" of the British and those of the American money market. In round figures at the end of 1930 they were (in millions of dollars):

	Liabilities		"Free Gold"
	Gross	Net	
British.....	2,035	1,270	120 (10%)
American....	2,865	2,025	1,514 (75%)

The "free-gold" item for Great Britain is the notes in the Banking Department of the Bank of England (see footnote 3); that for the United States is the surplus gold in the Federal Reserve System.

THE ATTACK ON DEPRESSIONS

By WALLACE B. DONHAM

ALMOST for the first time since this depression started there are a considerable number of encouraging signs. The program planned and put into effect by the President and Congress has relieved the strain on credits and averted a far-reaching collapse of our financial institutions and business corporations. Bank deposits have started up after dreary months of practically steady decline. Many basic commodities show some increase in price. A few business indices point upward. Others look as if they had reached the end of the toboggan slide. Credit strain and consequent loss of confidence intensified so many of our difficulties that some such improvement was to be expected. Now it is our task to turn this start into a strong upward surge. Perhaps nothing more is required in the way of legislative action. Almost certainly, if the steadying of credit is followed by appropriate measures to stabilize our great social groups, we may look ahead to this result.

Facing the Facts

We cannot blink the difficulties ahead. Ten million workmen representing 20% of our population are out of work. Unknown other millions are working part time with no assurance for the future. Our farmers are still in the depths of a depression which started way back in 1926. For nearly three years progressively our great middle class has lost its basis for security. Our wealthy group is no longer wealthy in the old sense. Relief expenses are enormous and taxes threaten dangerously. The debt structure of the country is wholly out of line with present values and incomes. Purchasing power is badly shattered at all points.

At such a time it is appropriate to consider lines of attack, both to make sure that we progress to ever greater heights, and that future maladjustments shall not push us into similar deep holes. For future maladjustments are sure. Fluctuations in business are normal and inevitable.

The only possible social stability is balance; and the only way to maintain balance is to offset forces, which upset us in one direction, by compensating forces which restore the balance. If this can be done quickly, mild measures will suffice and balance can readily be recovered. If compensation is delayed, instability becomes progressively more serious. Our job is not the job of preventing depressions, but of lessening their violence. In our unplanned economy, we rely almost wholly on accident to bring new compensatory forces into play. This time happy accidents have not occurred.

A new factor, that of rapid change, has come into the world. We have not yet learned how to adjust ourselves to its economic and social consequences. Engineers working at Columbia University estimate that, before machinery, no nation ever succeeded in producing and using over 2,000 calories or units of energy per capita per day. This is little if any more than the amount required to feed, clothe and shelter a people living under rigorous conditions. They contrast this with our present consumption of 150,000 units, or 75

times as much per capita as were used in George Washington's time. I expect their final results to show that at least 90% of this increase has taken place in the last 25 years. These figures are startling, for all that we have in a material way comes from the use of energy.

Truly we have the opportunity for a new era of undreamed material welfare. Already this increasing control over nature has brought more change in the way men live than had occurred since the Fall of Babylon. Unfortunately, the fact that science and machinery open wholly new possibilities for good does not, in our unskilled hands, prevent their collateral consequences from being peculiarly dangerous; nor does it lessen the difficulty of maintaining social balance in the midst of rapid change. Unless we learn how to maintain our stability, the evil consequences of machinery may outweigh the good.

Is it any wonder that the economics of this new world pass our understanding? The changes are of great variety and pervasiveness. Nor can they be predicted with any assurance.

Maladjustments Abroad and at Home

Many of these changes upset our international balance, for the process of mechanizing the world proceeds unevenly. China and India still produce about the same amount of energy that they used 5,000 years ago. Vast differences in general standards of living grow up in different countries and regions. Existing international customs and mechanisms are badly adapted to protect those countries which attain high standards of living from the unstabilizing competition of peoples with lower standards. Our farmers cannot keep their relative standing with the rest of America and sell their products at international price levels. Other nations are nearly as well equipped mechanically as we. With lower standards of living, and with a shortage of food which compels them to buy grain and meat by selling the products of industry, they must both undersell us in the less industrialized international markets and exclude us from their own markets. As a result we face a terrific collapse in our export trade. Unfortunately, this comes immediately on the heels of an unprecedented burst of exports stimulated by the War, by the reconstruction of Europe, and by the ill-fated balloon of foreign lending we set adrift in the gale of the last decade. To the disadvantage of ourselves and the rest of the world, we chose the worst time since machinery was invented to increase our reliance on foreign trade.

But our maladjustments are not all international. At home we struggle with constantly increasing division of labor, and with the specialization of individual workers which is the necessary result of machinery. We train millions of men, each to do parts of jobs, each part in itself useless, and then leave them at the mercy of maladjustments in the volume and kinds of consumer goods they produce, as volume and kind are related to effective purchasing power. In simpler times men worked to produce whole products, each useful in itself. Failure of demand quickly stopped production. When buying ceased, men went back to the farm and waited until the simple and necessary products they made were worn out and demand reestablished itself. Now we congregate such men in great cities and, when buyers fail, offer them no alternative except doles at sheer necessity levels. Thus, we destroy their buying power and quick-

en the deadly downward spiral, with depression feeding on depression and lack of employment breeding further loss of customers. In our luxury civilization when things wear out, effective demand for replacement may not occur, for the owner may be unable to buy. When this happens, work necessary to employ labor does not materialize.

Labor-saving devices and improvements in production management come with increasing rapidity as we produce more energy and improve its use in making goods. At first these devices and improvements may lower prices and thus stimulate demand, but unless we maintain and indeed constantly increase the total demand, greater mechanical progress and better production management mean more men out of work. There is evidence all over Europe and America that this stage has been reached.

With these and many other disorganizing results of progress, in spite of anything we do, we shall at times lose our economic balance. Whenever this happens we must restore balance quickly, or the terrific pace with which changes are brought on us, by science and machinery, will make recurring shocks to our social order more and more serious until they upset the structure. It is relatively immaterial whether the final upset be catastrophic, as the quick result of a crisis such as we are now passing through, or slow, through the destruction of security for the great mass of our people by foreclosure of debts, unemployment and doles, and increased taxation with its consequent destruction of capital.

The conditions are new. Nothing could be more unconvincing than argument from American history that we have come out of each preceding depression to greater prosperity. We forget the recent history of England and Germany, where for twenty or more years periods of prosperity have been disappointing both in duration and in the levels attained, and where unemployment is a permanent problem. Our experience may be similar.

Factors Demanding Attention: the Consumer

The intelligence of mankind brought on these changes. It must now find how to retain basic stability in the midst of them. Some things we must accept as premises. Technology will continue to develop; more and more will be produced per hour of human labor; division of labor will continuously become more complex. The developing life in a nation of 125,000,000 people makes maladjustments inevitable. Unless in general the products of our labor, whether from farm or factory, can be sold, these maladjustments will be critical. The problem is not to increase production, but to increase consumption. How is American business to find customers? Today 10,000,000 men, with 15,000,000 others dependent on them are wholly unable to get work and so are unable to buy the things they and their families need to live. Yet we have the capital, the machinery and the technical skill to make not only the things they need, but an astonishing proportion of the things they desire.

We have been pulled out of depressions in the past by happy accidents which introduced great new purchasing power at critical moments. Perhaps it was bumper crops at home and crop failures abroad; at one time it was a burst of railroad construction; at another, the building of great industrial plants. Several times, wars at home or abroad have contributed their destruc-

tive purchases. New industries like the automobile and the radio use the labor of vast numbers of men to satisfy well recognized human desires. The reconstruction of Europe aided by our aggressive but unfortunate foreign lending policy furnished the last great stimulus. Now no such thing comes to our rescue, nor does any one of these appear likely to recur. Perhaps something unforeseeable will show up spontaneously. The chance looks remote, and we should consider well how, if nothing of the kind does happen, we may emerge from our troubles to full enjoyment of the increased material welfare so clearly possible.

If we do nothing and no offsetting force appears spontaneously, progressive development of unemployment and destruction of purchasing power may bring in more and more factors of distress. This depression is conclusive evidence that we must not for the future rely on happy accidents to keep recurring periods of depression within manageable limits. Our present plight is not strange. The wonder is that our haphazard economy has worked so well in the past.

True, we have developed some compensatory mechanisms for bringing maladjustments into a new balance, but they are clearly inadequate. The best recognized mechanisms are slow acting forces of demand and supply, working out through the flow of money and credit, and through competition. It is assumed that these economic factors will bring necessary new balance out of the uncoordinated competitive judgment of many manufacturers, wholesalers and retailers, all making uninformed guesses as to consumer demand and its whims, and as to the effect of unknown new competitive forces operating not only within each industry, but between industries which satisfy competing human wants.

Controlling the Flow of Money and Credit

Unfortunately the flow of money and credit is international and largely out of our control. Moreover it has a great variety of things to take care of, beside adjusting the present demand for commodities with their present supply. As a result its steps toward a new balance are at best slow, and badly related to our domestic situation. Where production becomes a way of living, as with our farmers, money and credit may operate in exactly the wrong way. Similarly the effect of unrestrained competition is as often bad as good. Moreover neither money and credit nor competition operates with reasonable effectiveness unless the natural play of their economic power is allowed to have practically full scope. Long since, the disturbing consequences of *laissez faire* policies became so obvious, that every civilized nation put great restrictions on the free flow of money and credit, and on both international and domestic competition.

The steady development of permanent unemployment all over Europe indicates that we cannot rely on competition or the flow of money and credit to bring about adjustments in demand and supply required to give steady work. It is my best judgment that, unless we add other remedies to our accomplishments in stabilizing money and credits, we shall emerge from this depression supporting on doles a permanent army of at least five million unemployed.

But I would not unduly minimize the importance of money and credit. True we cannot rely on their sound working as a remedy for our ills, but when money and credit are sick the whole

social organism is in danger. Constructive action in other fields is almost impossible. The speed and intensity of this depression imposed early strains on our banking system. Through unfortunate defects in our banking laws and short sighted defensive policies of many banks, it was unable to meet these strains. Confidence was rapidly destroyed, and credit collapse added a prolonged unnecessary money panic to our other difficulties. The administration at Washington properly devoted major attention to keeping money and credit functioning. Without the effective aid to financial institutions and corporations given by the President and Congress, a complete collapse could hardly have been avoided.

As it looks now, the peak of the financial strain is past, and we can bring in further methods of adjustment without fear of a general financial catastrophe. It is this possibility which may make so significant the President's action in constituting even at this late date a committee for general study of the depression. This committee faces a great opportunity and a heavy responsibility. Their work should result in a program for the next Congress, involving needed constructive action outside the realms of finance and relief for the unemployed.

Much has already been done. If business stability and balance can be secured by protecting the credit structure of banks and other corporations, this is now possible. The Federal Reserve System is in position to expand credit. These are important accomplishments. Certainly continued expansion of money and credit and rising prices are of high significance, for we cannot on present price levels and present incomes take care of our debts and mortgages and pay the taxes and other charges required to meet government and relief expenditures. If things were not so bad, these accomplishments and possibilities might be enough. Can we safely assume that they will be?

Buyers are necessary if unemployment is to be conquered, or if the credit relief already given is to end with healthy financial and business corporations. Unless buying starts on a large scale, government loans will end in government control. The critical question is whether our credit attack on the depression will restore buyers to American industry. I do not believe there is enough resiliency left after the progressive destruction of values for almost three years to straighten us out.

I may be—I hope I am—wrong in feeling this doubt. Many competent observers disagree with me. But does anyone doubt that continuance for another year of vast unemployment, low prices, disorganized agriculture, disrupted production, shattered purchasing power, fixed debts, low incomes and heavier taxes, would make things far worse than anything we have seen? Yet without vastly increased buying, all these things will occur. It is well that the President has started a broader study. If credit is not enough, much valuable time has been lost. Nevertheless, I still believe we can recover balance by adding other measures to those which have stabilized credit.

The Domestic Consumer vs. Foreign Markets

To make sure that we come out of this depression to greater prosperity, or even that we regain in the near future a condition comparable with our recent past, and to protect us from future catastrophes, we need to devise mechanisms in this depression for immediate use, and for early use in future depres-

sions, which will attack directly the important types of difficulty now assailing us.

We cannot effectively understand and control the forces bringing about depressions, but fortunately we do know something of the maladjustments which occur. Credit strains and collapses, and dislocations of price structure are always present. Production and consumption get out of gear, both through lack of coordination between the kinds of goods produced and the kinds of things for which effective demand exists and through loss of purchasing power. Unemployment is accentuated. In recent years our farmers have been in trouble. Greater buying at proper prices is essential to curing all of these difficulties. Greater production is not our problem. Rapid progress in production brings on our most serious maladjustments. Waste in production, however important to the individual manufacturer, is from a social point of view almost immaterial. The only halt in production, which has broad social significance, is the halt which results from lack of buyers,—a condition such as we now face.

The key to depressions lies with consumers.

Now consumers are of course both foreign and domestic, though in the heyday of foreign trade the foreigner bought only 10% of our total production. For reasons all too apparent, foreign buyers cannot be quickly restored, if indeed they can on a large scale be restored at all. We shall not regain stability in this country by widespread reductions in tariffs, allowing the importation of one after another manufactured product on which groups of our own business men and our own labor are dependent. No one would suggest that Ford and Chevrolet could benefit by having the employees of Ford stop buying Fords to buy Chevrolets, while the employees of Chevrolet stopped buying Chevrolets to buy Fords. Can England, Germany and the United States, all equipped with both capital and trained labor to make essentially the same things, prosper by exchanging substantially identical products? Or can we sell on a large scale to Australia and the Argentine, when by and large the only things we can take in payment are agricultural products of which we already grow too much?

The cult of internationalism assumes without argument that the world will constantly become more interdependent economically. The history of the last three years indicates the contrary. We are witnessing on a vast scale the breakdown of international trade and its limitation more nearly to those exchanges made necessary by uneven distribution of essential raw materials. This breakdown followed the cessation of international lending, but it was forecast by a steady decline in prices of most basic commodities starting years before this depression. Though we lacked the wisdom to see it, this decline indicated a condition of overproduction which would soon destroy both the basis for exchanging these products for manufactured goods, and the basis for further extension of credit to agricultural and mining countries.

No, we should not wait for the rest of the world to solve our problem. We should tackle the job at home where we can control conditions. Our effort must be to rebuild our own business. We should deal with the debt situation in some way which will give Europe a better chance to rebuild their business conditions, but we should not expect this to start our wheels going. Debt

settlement will not solve our problem. Wholly ignoring market appraisals, we still talk of foreign debts as if they were worth, including public and private debts, about thirty billion dollars, and give them comparable weights in our thinking, whereas long since we stopped thinking of Radio Corporation stock in terms of several hundred dollars a share. The vital question in foreign debts is not what relatively small amount we can retrieve from our past, but the importance to us culturally and socially of a reconstructed Europe.

When once more buying starts on an adequate scale, it will mainly be home buying.

Who Are to Be the Buyers?

On the list of domestic buyers whose possibilities for expansion we should study, I list first, our corporations. In general, corporations buy only as they see buyers for their own products. If some great new product were in sight, a product which would obviously be desired by millions of men, capital now idle in corporations starved for lack of business might be invested in new plants and equipment, but there is little sign of such a product or of such corporate buying. Indeed if there were any such product, it would probably stay in the experimental stage until many more prospective customers were able to buy.

Of course, if confidence is restored to a sufficient degree, many corporations will buy staple raw materials in advance of their needs. Some tendency in this direction, coupled with buying by speculators, is involved in the recent upward flurry of basic commodity prices. With the present state of our knowledge of these commodities, and of the disorganization in world markets for most of them, such forward buying in excess of reasonable short-time requirements is highly speculative, and questionable manufacturing policy. The risks involved should be counted with care. Systematic and thorough research in the economics of the commodity in question should certainly precede any large buying. We need more information, carefully collected and appraised, on the great basic commodities. Where facts are available, they indicate in most cases no sound basis for forward buying. We cannot rely on corporations to start us upward.

So far as domestic buyers are concerned we are left with the ultimate consumer, always directly and indirectly 90% or more of our market. How can we restore buying by the American people? Here only is direct attack on the depression possible, and here only have we the elements of the problem in our own control. Obviously we cannot consider 125,000,000 individuals. We must pick out of the whole nation a few large social groups and consider how, through measures directed at great masses of men, buying power and a sense of security can be reestablished. Now all groups are badly shaken.

For present purposes I pick three large groups:

I. The Farmer and the Miner whose problems are essentially similar.
II. The Unemployed.
III. The Middle Class.

I shall discuss each briefly.

I. *The Farmer.*—Farmers and miners are involved in the world collapse of basic commodity prices. They produce more than we need at home, and the prices of their total production are in general controlled by the inter-

national markets. If we seek a method of really curing the depression in the United States, it will involve defending the farmer and the miner in our home market and assuring him higher prices for what we consume here. Tariffs prevent foreign flooding of our market, but cannot by themselves prevent domestic prices from sagging to the export level. Nevertheless, there are feasible methods of separating the domestic from the export price level, and raising prices on home-consumed products to a point reasonably related to the rest of our price structure and to American standards of living. Such methods involve neither price fixing nor bounties by the Government. I see no hope that cooperative marketing schemes will do the trick. We have emerged from past depressions because we had bumper crops here at prices made high by crop failures abroad. The stake, counting business men directly dependent on these groups, is the buying power of close to 50,000,000 people. I believe it possible to restore most of this group to prosperity. If this is done, it will in all probability cure our depression and start us going. A program of farm relief along these lines should be framed at once. Governor Roosevelt's Kansas address is really significant. The question, however, is not one on which parties should split. The General Committee constituted by the President should cooperate with farm interests and with farm economists, in drafting specific legislation. The farmer presents one of our greatest business opportunities and offers what is probably the quickest road to recovery from the depression.

II. *The Unemployed.*—Like business men who lack customers, the unemployed have no chance of starting themselves. Yet they represent a market of around 25,000,000 people, all of whom want the things they could themselves make. It is sheer madness if our great industrial civilizations try no approach to this problem except sniping attacks through government works, made work and doles. Generally speaking, every product of industry tends constantly to require less labor in the making. Technological progress and improvements in management combine to bring this about. So long as effective demand for a product increases, this may bring about an increase in the total labor employed. But competition builds up, and the urge to improve processes and management becomes stronger. During this depression, the passion to survive has forced employers to learn how they may do things with less and less labor. When recovery comes, these lessons will not be lost. Practically speaking, all our industries are overequipped to supply any demand which is likely to develop. Nearly all could with greatly reduced labor forces go back to the volume of 1928.

Technological progress always tends to bring about unemployment. Up to the end of 1919, such unemployment was rapidly absorbed in making a series of new things which in better ways satisfied well recognized consumer wants. But during the decade preceding 1929, new products designed to meet such wants ceased to appear with the frequency and in the quantities required to keep our workmen employed. At this time, however, temporary foreign demand, stimulated by large foreign loans and by the reconstruction needs of Europe, almost offset the reduction in labor required; and steady employment for the great bulk of our labor at high wages built

up our domestic demand for goods we were already making. Nevertheless, 1920 is the high point in factory employment in this country. Now we have lost our foreign demand and are stifled by unemployment.

If we are to continue without planning, we need a succession of new products, like the automobile, desired by millions of men and requiring large amounts of labor both in building new factories and machinery, and in making the products. Unfortunately, such new products are less likely to appear in the near future for we already possess reasonably good devices to satisfy all realized material wants. The last ten years have brought to market nothing which requires even a substantial fraction of the labor released by the progress of invention and management. Nor since this depression began has anything of the necessary importance been suggested. The project for new mass-production housing may unexpectedly prove itself so important as to employ many more men than it displaces, but there is no present basis for belief that it will. In itself it is in the nature of a process improvement, and would be helpful only if it operates on a very large scale. Any important product satisfying new wants would, if capital is courageous enough, serve as a starter for business. Men would be employed in making and equipping factories and in operating them. Their buying would start other employment. The spiral might reverse itself. No small thing, however, can accomplish that result, and with the present rate of improvement in processes, there is little chance that we shall develop a succession of new things on the scale required to start and keep things going. We shall not soon see such stimulants to business as the automobile, the World War, the radio, the reconstruction of Europe and our aggressive foreign lending policy.

If it were necessary to wait for new things, the situation would be discouraging. But is this necessary? I believe not. The potential demand for things we can now produce to satisfy existing wants is tremendous. We need a sane method of giving continuous employment to everyone who wants it, producing the things we know how to make.

As I said in substance in *Business Looks at the Unforeseen*, the first step in any long-time handling of the subject should be the organization of the labor market through the creation of adequate employment agencies, labor exchanges, and really accurate national and regional indices of unemployment. This involves technical difficulties requiring high-grade knowledge, skill, and judgment. As a next step, the hours of labor of each individual worker should be elastically controlled with reference to such indices at points which will assure work for all fit workers. I particularly do not mean that the hours of work offered by given factories should be controlled. Let each operate as many hours as it will or can. The limiting factor should be man power, not goods or machinery. Under such a plan I believe many of our problems of overequipment and overproduction would diminish without preserving unfit individual industries through price fixing or limitation of output. It is obvious that hours worked would vary with the times, and they should be adjusted to the times as nearly automatically as possible. Federal legislation would be necessary to bring this about in any comprehensive way. Of course, there are difficulties in any such plan, but

they do not appear insuperable. The extraordinary mobility of American labor would assist materially in working out such a program. No solution will give wholly satisfactory results.

So far as this depression is concerned, we possess no good indices of employment. Starting points, whether we have Federal legislation or not, would of necessity be fixed arbitrarily. The suggestion for spreading labor, presented on behalf of the President's Committee, is thoroughly sound as a first step.

Such a program, put into effect quickly and perfected as more information becomes available, would minimize the difficulties arising out of maladjustments in the demand and supply of goods and help solve many of our present competitive problems, for it would make the controlling factor at all times the demand and supply of labor and assure all fit men continuous work. Our most dangerous problem would be half solved.

It is obvious, however, that no such plan for spreading labor would assure the building up of industry. Its principal effect would be to get away from the disturbing effects of loafing and to obviate the necessity of doles and charity, with their consequent threat to the social structure. Such a device should be supplemented by other plans or mechanisms which will introduce new purchasing power into the situation when business slows down. Now we wait for bumper crops here and famines abroad, or for great new industries to evolve or for wars, or for some other adventitious fact which introduces the new purchasing power needed as a starter for industry. I believe that a body of men thinking continuously on this problem can devise methods of introducing such purchasing power by careful planning, and that indices of unemployment interpreted in connection with the hours of labor current at any moment could be used to determine whether such new purchasing power is needed or not. Good business would be dependent on solving this problem, and with attention focused on it, there is real reason to believe we should find the answer. One objection to dole systems is that attention does not get focused on this problem. Doles may even make good business for some industries by giving purchasing power to idle people.

Since in our luxury civilization mass buying is essential to business, we must stabilize the income of our workers on a high plane. To accomplish this, we must not only assure continuous employment but, unless we are willing to leave the future wholly to chance, we must devise artificial ways of introducing new purchasing power whenever business sags; and no new purchasing power develops spontaneously. Continuous work and high wages are essential to good business. While now many wage cuts are necessary, every reduced pay envelope destroys the buying power of customers. Failure to restore wages rapidly when this becomes possible will be a calamity almost inevitably reducing our national standards of living and preventing business from becoming really good. In the future the distribution of purchasing power among masses of people will be more important to the continuance of good business than the rapid accumulation of fixed capital.

All methods of introducing the buying needed to start business should be explored. Government works, systems of barter, consumer credits; and social improvements, such as slum removal projects, the construction of clubs and

playgrounds for our city youth, of toll bridges and highways keeping the automobile out of our towns and cities, might all contribute. Industry and government must cooperate.

Government programs for public works can be one very important method of introducing new purchasing power in periods of depression. As our present experience indicates, however, such programs must be worked out well in advance of the emergency and injected before credit strains and price deflation disturb public credit. In addition to public buildings and other improvements undertaken by purely governmental agencies, there is a wide field in which a combination of business and government endeavor could function effectively. A practical proposal, for example, would be a plan for rebuilding the slum areas of large cities. It would be especially helpful because of the ramifications of the construction industries. Such plans, based on a careful study of the social as well as economic problems involved, should be ready. Now, if we do these things, we must extemporize for the emergency.

Mr. M. C. Rorty, formerly president of the International Telephone Securities Company, has recently outlined a plan to expedite business recovery by the introduction of large new purchasing power in the form of government bonuses offered on competitive bids to stimulate private enterprises to undertake new construction.[1] This plan may well be the kind of device needed to introduce new purchasing power whenever business slows down. It has had too little consideration.

[1] See Rorty, M. C., "How May Business Revival Be Forced?" X HARVARD BUSINESS REVIEW 3, Supplement to April, 1932, issue, p. 385.

Much of our trouble comes from leaving so many of these adjustments to money and credit and from improper distribution of buying power under our complicated division of labor. We cannot get away from division of labor, but many men are engaged in serious study to discover how we may supplement the deficiencies of our existing monetary and credit system by other mechanisms of exchange. By the free interchange of thought on this subject we might work out plans which would at least enable men to make the things they themselves need.

Some answer to these problems must be found or we shall face the silly burden of supporting in idleness a large part of our population, until they lose the will to work and ultimately destroy civilization.

"How do you know I'm mad?" said Alice in Wonderland.

"You must be," said the cat, "or you wouldn't be here."

We certainly shall be mad if, without trying anything but money and credit as a remedy, we supinely accept continuous unemployment.

III. *The Middle Class.*—This great group made up of small business men, salaried men, doctors, lawyers, professors, the large army of women and children dependent on trust funds, and many others, can best be stabilized by (a) expansion of prices which will reduce debt and tax burdens to normal, (b) starting business going through expansion of credit, through stabilizing the farmer and miner, and through solving the unemployment problem. In other words, the attack on this group's problem is indirect. Nevertheless, it is of prime importance, for the stability of our society depends mainly on its middle class.

The Leadership Required

The task of leadership in this crisis is not simple. Over and above the qualities normally required of our leaders, they must understand the problems of an industrial society, the complication of which passes all precedent. If we work out any answer to the problems brought on by recurring depressions, it will be by developing and having ready for use methods of adjustment, defense, and compensation, which will quickly counteract malajustments. Now, these things are no one's business. We should have a planning group constantly working on such questions. Our most serious difficulties arise when one social group after another is unstabilized. We must learn how to prevent this before the cumulative effect of these unstable conditions brings on a catastrophe such as we are now witnessing. A group devoting its whole time to this task could accomplish much. Today the only substitute for such a permanent group is the President's Committee. It faces a great problem without proper preparation or time to study. Nevertheless, much depends on its wisdom. We can never prevent the ship from pitching in storms, but we should be able by planning to design, load and navigate so well that we ride out bad weather and return quickly to calm waters.

A poet laureate of England stated the essentials of the problem. "Our stability is but balance, and wisdom lies in masterful administration of the unforeseen."[2]

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[2] Bridges, Robert, "The Testament of Beauty."

QUADRAGESIMO ANNO IN THE BUSINESS WORLD

By BERNARD W. DEMPSEY

THE annual review of the International Labour Office at Geneva, in its survey of the labor world for 1930, devotes more than six pages to laudatory comment on the social and economic program of the Catholic Church. The attitude of the Church, it says, is "inspired by principles of justice, dignity and solidarity, which thus link it up with the outlook and action of the international labour organization." These remarks were written before the publication of the more recent pronouncement of the Vatican on this subject, namely, the encyclical letter,[1] *Quadragesimo Anno*, "After Forty Years." This letter was released from Rome on May 15, 1931, the fortieth anniversary of a similar letter by Leo XIII, and is popularly referred to as the encyclical on capital and labor. During the summer conventions held at Geneva in 1931, the new encyclical was enthusiastically acclaimed by labor men from all over the world, so enthusiastically, in fact, that the Italian delegates, mindful of the criticism of Italian state syndicalism which the letter contains, were moved to protest.

This encyclical was addressed to the bishops of the world and will have been referred by them to their pastors and by these in turn explained to their respective parishes. This involves directly in excess of three hundred million people. The encyclical will receive earnest and respectful study not only at Rome or Dublin, but at Georgetown, Notre Dame and Marquette, here at home, at Buenos Aires, at Jochi in Tokio, at Beaumont and the Oxford Workingmen's College in England, at Cracow, and at Prague—and this not only in the classroom and from the pulpit, but in the lecture hall and study club as well. When all this is borne in mind, together with the exceptional advantages of the clear international outlook possessed by the one issuing the document, such an encyclical may readily be seen to be a matter of import, meriting one's attention regardless of one's doctrinal beliefs or lack of them.

The encyclical letter itself rightly places great emphasis on personal moral and religious values in the work of readjusting the present industrial chaos. It will be the purpose of this paper, after outlining the letter in general terms, to develop certain practical suggestions applicable in the workaday business world.

Major Considerations: Capital, Labor and the State

Broadly speaking, the encyclical steers a middle course between the extremes of social doctrine now present among us; it several times quotes Leo XIII's dictum, "Capital cannot do without labor, nor labor without capital." Private property receives first

[1] An encyclical letter in itself is a mere practical commentary on some current matter addressed by the Pope to the bishops for their direction. It ordinarily involves no question of infallible interpretation. Though issued by the Pope, in his name and at his wish, an encyclical usually embodies the cooperation of the most authoritative Catholic scholars in the field concerned; in this case, according to common report, of certain Belgian and German economists.

consideration, and the tenet of Christian thinkers that private property is an inalienable right is reiterated. But it is not regarded as an unlimited right. The face of the earth was designed to furnish sustenance to all men, and the most effective means of attaining that end is exploitation by private ownership. Yet the primary end and the instrumental functions of property must never be lost sight of; the right of ownership of property does not carry with it unlimited right in the use of property. Such unlimited rights in the administration of property may deprive willing workers of the opportunity of securing means of sustenance from the earth, thereby defeating the primary purpose of the institution. This social aspect of private property must be safeguarded by the State, not by the abolition of private property, but by the control of it, lest it defeat its own purpose. If the social character of private property be lost sight of, we have an exaggerated individualism which by depriving the many of property may prepare the way for the destruction of both individualism and private property; if the individual aspect of ownership be submerged, we have socialism or communism—two conditions equally undesirable. In a special section, notice is taken of the change which has come to pass in the doctrines of socialism in the forty years since Leo XIII's letter, *Rerum Novarum*. The left wing has branched off into bolshevism; the right wing has so modified its position that there may be a question as to whether this be "socialism" at all.

With regard to wages, the more recent encyclical rejects two extreme doctrines; the right of capital to all profit, leaving to the workers but a minimum of subsistence, and the doctrine of the right of the laborer to the whole product and profit. Labor like private property has a social as well as an individual aspect. It is by labor mainly that wealth is increased, and labor is the only means by which the average man can acquire wealth to fulfill his obligations to himself and his family. Employers, therefore, it is held, have no right to deprive the worker of a wage which is necessary to provide him and his family with a sum sufficient with prudent management to furnish frugal comfort, a modest fortune, and freedom from insecurity. Extremes are to be avoided, for both too low wages and too high wages lead to dislocation of industry. But at present, better wages and a larger share in the profits of industry are the simplest way to attain a better distribution of wealth, which will be a partial solvent of our social ills. And these are practically the only means of maintaining such a distribution, once achieved.

Bad management, lack of enterprise, or obsolete equipment or methods, any one or all of which result in decreased earning power, are not an appropriate warrant for lowering the wages of labor. However, if industry be unprofitable due to the fault of neither employers nor employees, but to the pressure of external circumstances, as the encyclical points out, the problem must be attacked jointly by owners, workers and the qualified representatives of the public. This external pressure arising from cyclical uncertainties, we should like to believe, is the usual cause of wage cuts, and this analysis seems to involve scheduling on some sort of national plan. The wage contract is not held to be unjust in itself, as some would say, but any means which can be devised

to obtain for workers the status of partnership by giving some part in ownership, management or profits, is useful and commendable. Workers are encouraged to form associations for the betterment of their own condition and also for participation in functional or vocational representative government.

The proper place of the State in economic affairs is likewise conceived as a middle ground between radical individualism, leading to consolidated monstrosities, and socialism:

> Just as it is wrong to withdraw from the individual and commit to the community at large what private industry and enterprise can accomplish, so, too, it is an injustice, a grave evil and a disturbance of right order for a larger and higher organization to arrogate to itself functions which can be performed efficiently by smaller and lower bodies. The State should leave to these smaller groups the settlement of business of minor importance. It will thus carry on with greater freedom, power and success, the tasks belonging to it, because it alone can effectively accomplish these, directing, watching, stimulating, restraining as circumstances suggest or necessity demands. Let those in power, therefore, be convinced that the more faithfully this principle be followed, and a graded hierarchical order exist between the various subsidiary organizations, the more excellent will be both the authority and the efficiency of the social organization as a whole and the happier and more prosperous the State . . . The aim of social legislation must therefore be the reestablishment of vocational groups . . . But there cannot be any question of a perfect cure (of class warfare) except this opposition be done away with and well-ordered members of the social body come into being anew, vocational groups, namely, binding men together not according to the position they occupy in the labor market but according to the diverse functions which they exercise in society.

In such groups, with representative assemblies, employers and employees could cooperate in solving the problems of the industry as a whole, with the State acting merely as umpire and arbiter where necessary. By these means then, first, the establishment of relatively higher wage levels as a necessary condition both to social justice and to economic stability, through the action of workers' associations, and, second, the formation of vocational or industrial groups to settle the policies of the industry for the welfare of the people, is the social order to be reconstructed. "And unless these things be done, let no one persuade himself that the peace and tranquillity of human society can be effectively defended against the forces of revolution."

The Industrial Interest in the Product vs. the Wage Incentive Based on Time

A personal friend of this writer, apprentice supervisor in one of our large and successful corporations and a frequent contributor to the technical journals and reviews on questions of labor and management, has proposed that if labor would contract with the managers to maintain a full crew of efficient help at all times, a long step would be taken toward industrial peace. This would be throwing one of the burdens of management onto the labor union; to that extent, labor would be participating in management and would have some incentive to maintain high-class workmen among its members and, moreover, have an eye to plant efficiency for the purpose of maintaining wages. This, however, would involve formal recognition of the labor union, a thing which has become a bugaboo in the eyes of many American employers. The precise opposite indeed has, with a keen appreciation of human nature, been dubbed the "American" plan.

Yet, in the words of the encyclical, unless the social nature of labor be recognized, labor "can be neither equitably appraised nor properly recompensed." Some complain that labor itself does not appreciate its own social importance and duties and is irresponsible. May not the irresponsibility of these unions be due to the fact that, the cooperative nature of production not being admitted by many employers, the unions have been given no responsibility commensurate with their place in the industrial process? American industrialists refuse to favor associational activities of labor, although they admit their own interdependence by forming trade associations. This anomaly seems to be due to a failure on the part of managers to grasp the nature and extent of the change which division of labor has wrought in our economic structure. The wage contract, even when made by and for a group, remains essentially an individual contract, for the bargain is made with each individual, presumably for what he does. The employer, though consulting with the group as to the rate to be paid, still makes an individual contract with the worker. Not only is this a fact, but it has also been insisted upon by employers as a matter of principle—the right of industrial association and the right of collective bargaining are declared to have nothing to do with each other or with the right of collective contract.

Such an arrangement is unreal for two reasons. First, the thing bought and paid for is not the work of one man; the thing in which the employer is interested is not his workers' time, but the thing produced. Under a system of division of labor, especially one as minute as modern mechanical division of labor, the essential thing in production is the cooperation of all on the job. Now, any system of remuneration which clings to an outworn "man-to-man" relationship is divorcing itself more and more from the facts of industrial life. Under division of labor, the thing produced is a cooperative effort; I can work only as rapidly as you do, and as well as the material you send me warrants. Our department can work only as speedily or as efficiently as the one next to us. This solidarity of the productive process, an industrial reality, should be accepted for the fact that it is, and it should be accorded a place in determining the scale of remuneration. In certain industries the collective labor contract has been devised for contracting with the group for what is really a group effort, and in others the group bonus is used; in both cases the men are paid, not individually for what they do individually, but collectively for what they do collectively. They are paid on the basis of the job. This provides an incentive for cooperative production.

In addition to the objection that the laborer is paid individually for what is essentially a group effort, there is a further consideration or perhaps a different facet of the same difficulty, namely that the worker gets paid for his time and his effort, when as a matter of fact the employer has no real concern with this whatever. The worker's task by the terms of his contract is indeterminate in many respects. His is the status of the servant, "Go, and he goeth." Now this command over a man's time and effort is an elusive thing, controlled largely by the will of the one who is working, as any plant superintendent will testify. Time has defied the philosophers for centuries; will it yield to "time-study" men? It

is not the time, as such, of the worker that the management wants; it is the thing produced. A contract for the use of a man's time is in many practical respects unenforcible, and the wage contract will be unsatisfactory until it reflects industrial reality and allows a group to bargain for a wage to be paid to a group for what they accomplish as a group, and not for their time, indeterminate and indeterminable. Piecework may seem to be a solution for this difficulty, but even pieceworkers have sometimes been so impressed by the cooperative nature of their work as to request that they be paid on a group basis.

Something along this line has been accomplished among the stevedores and longshoremen on the Great Lakes. Italian, Belgian and French longshoremen and other marine workers have advanced much further, even to the point of operating, collectively, government-owned vessels. Italian, German and Belgian building trades have made remarkable strides, not to mention good profits. Printers in France have likewise operated successfully on a group basis.

This method of determining wages automatically eliminates many of the costs of supervision, for the group becomes its own taskmaster and the work of the timekeeper becomes of secondary importance. This certainly gives the workers, especially the more competent ones, a voice in management and, combined with a reasonable profit-sharing plan, furnishes a strong stimulus to increased production. On any other basis, industry is paying for something that it can't measure and really doesn't want—the worker's time. Industry is getting something which is very necessary, cooperation, but offers little incentive for its increase; and industry is ignoring the basic fact, the product which is the result of group effort. Thus workingmen's associations and collective bargaining and remuneration are not only useful weapons to labor and aids to social justice, but they are the only means by which the wage system can be made to reflect the actualities of the industrial process by making a quantitative contract reflect a quantitative bargain. For these additional reasons, not mentioned in the encyclical, do vocational groups seem to be a necessary step in our industrial evolution.[2]

State Economic Councils

The evil of excessive political interference in industrial affairs is, in the ideas of the encyclical, to be overcome by the formation of associations, first, of employees and employers separately, then of their representatives jointly. Here the letter emphasizes anew the need of a revival of the social sense of responsibility. The failure of the guild system to meet the exigencies of the Industrial Revolution, and the subsequent rigid stratification of industry, is laid, not to any intrinsic defect in this system of industrial self-government, but rather to the growth of selfishness among the members, who, losing sight of the principles of human association, abused their monopolistic privileges and were subsequently overthrown. That the view expressed by the encyclical agrees in a measure with the American criterion of as little government in business as possible, is evident from the criticism passed by the encyclical on Italian corporatism. The

[2] The analysis here sketched has been elaborated in detail by T. M. Ave-Lallemant, of Marquette University, in XI *American Economic Review* 2, June, 1921, p. 237. Since that publication, Mr. Ave-Lallemant has pursued still further his investigation in this field.

advantages of that system in overcoming the evils of socialism on the one hand and the excesses of individualism on the other are admitted. But "there are some who fear that the State is substituting itself in the place of private initiative, instead of limiting itself to necessary and sufficient help and assistance. It is feared that the new syndical and corporative institution possesses an excessively bureaucratic and political character."

Our comparative economic isolation and our comparative economic stability, as well as our "American prosperity," have kept us from the same serious interest in democratic industrial organization or the same pressing problems crying for solution experienced by other countries, at least up to the present depression. Consequently, few Americans outside the graduate classroom are familiar with the extent to which organizations, embodying in greater or less degree the suggestions of the encyclical, are in actual operation at the present time. Russia, of course, has carried bureaucracy to its utmost limits, and it is the efficiency in national organization produced by this bureaucracy that gives us cause to fear her as a potential competitor. But, leaving Russia out of the picture, France, Germany, England, Italy, Czechoslovakia, Spain, Japan, and Belgium have also adopted measures of varying degrees of authority for the purpose of stabilizing industry in the social interest, eliminating meaningless competition, and husbanding the resources of the country.

France is not a nation of large-scale standardized production. In consequence, she does not present so much of a network of articulated corporations as does a highly industrialized state. Before the World War, however, a fairly large number of *comptiors* had appeared, involving sales quotas, sales areas, and price-fixing combinations. At the top of this system stood the *Confédération Générale de Production* with an indefinable quasi-legal status. The War, however, impressed upon the French the advantages of mass production, and during the reconstruction period these territorial divisions were more definitely organized. Meanwhile, the *Confédération Générale du Travail* had been urging, since the close of the War, a national economic council to determine the policies of the nation. The result was the establishment by decree in January, 1925, of the National Economic Council (*Conseil National Economique*). The council is not subordinate to any existing department of the Government. Its members are not appointed by the Government, but merely approved on the nomination of the interests concerned. The council was not given power to initiate legislation, for it was feared that this would be unconstitutional. The recommendations of the council are transmitted to the Premier, who is charged with referring the matter back to the council within one month with a report on the action taken. The council deliberates on matters of its own choosing, either of the national economy or of international scope.[3]

France, while avoiding both government ownership and government control, has developed various devices for the direction of large-scale industry. Like Germany, France has permitted the national and local governmental units to become stockholders in, and to appoint directors to, public utilities.

[3] See Jolly, Pierre, "The State and Its Subdivisions as Members of Business Corporations," and "Public Utilities in France," IX HARVARD BUSINESS REVIEW 1 and 4, October, 1930, and July, 1931, pp. 18 and 409.

But of greater interest for our present purpose are the Chambers of Commerce, the functions of which are advisory and consultative in the main. Since their activities have been for the most part on a local scale, any inference as to the success of similar national bodies may seem unwarranted. Yet the French Chamber of Commerce does seem to indicate that industrial self-government is in principle sound.

By a Treasury minute of January 27, 1930, there was established in England an economic advisory council, composed of cabinet members together with such persons of knowledge and experience as may be chosen by the Prime Minister. Its expressed purpose is to advise His Majesty's Government in economic matters, but it has no administrative or executive powers. Sessions are secret. Thus far, the only tangible results of the existence of the council are the publication of a supplement to the *Monthly Labour Gazette*, on industrial conditions, and a report presented to the Government on the condition of the iron and steel industries on the continent.

Far more concrete and powerful is the assembly proposed by Winston Churchill, who is quoted in the *Manchester Guardian* for June 19, 1931. Mr. Churchill believes that Parliament should:

> Create a new assembly subordinate to itself, free from organized party exigencies, detached from public opinion, and composed of persons possessing special qualifications in economic and commercial matters. I should tentatively suggest that the economic subparliament be set up by statute and should consist of one hundred and twenty members of the House of Commons experienced in these subjects and eighty business men, trade union representatives or economic authorities.

Germany before the World War had traveled much further on the road of socialization than any other of the western nations. This was true in actual government ownership, in government participation in enterprises not owned by the State, and in State toleration and promotion of industrial combinations. Under the Empire this had a strong and unwholesome bureaucratic flavor. When Germany came to found a new government in the convention at Weimar, there was written into the new constitution an article attempting to establish a degree of self-government in industry. According to Article 165 of the document drawn up at that congress, workers' and owners' associations are recognized before the law. The workers are organized into local, district, and national councils. Employers are organized into district and national councils by functional groups. The representatives of these meet in a national economic council, which besides advisory functions may initiate social legislation, and "supervisory and administrative functions may be delegated to the workers' councils and to the economic councils within their respective areas." The council is to be composed of 326 members, of whom the principal groups, together with their representative strength, are: agriculture, 68; industry, 68; commerce and banking, 44; consumers, 30; state governments, 12; national government, 12. The membership of each of these groups is divided between owners and employees.

Post-war Germany was unable to put this machinery into full effect at once; on August 12, 1919, a few weeks after the adoption of the new constitution, however, a provisional council was organized which is still functioning. In 1921, the representation was simplified in order to accelerate business, but it was found that the members in

the smaller body voted on strictly class lines rather than on those dictated by the national interest. The size of the council made it unwieldy, and most of the work has been done in committees of which at one time there were many—fifty-three. This number was reduced to four during the economy program of 1924, and during the periods of dislocation the council was deprived of its powers of initiation. A bill for the reorganization of the council was introduced into the *Reichsrat* in 1930, and passed, but it failed in the *Reichstag*. The difficulty faced by the measure was not one arising from the question as to whether the council was to continue in existence, but rather one of finding a satisfactory quota of representation for the various groups. The bill establishing the permanent council will undoubtedly be amended and passed. Since its inception, the council has dealt with the whole range of national economic problems.

Italy,[4] from similar Hegelian notions of social philosophy, has gone further than Germany, but not so far as Russia in the development of a functional representative government. Labor in Italy, since 1926, has been a social obligation, and all workers are combined in local syndicates; employers are likewise grouped. The groups of employees' associations and the groups of employers' associations are then combined into a federation. Thus far, labor and ownership are independent. They meet in thirteen grand national syndicates or confederations, one for each of the major industrial fields. If the disputes which may arise between different factions cannot be adjusted in the syndicate, they are taken to a labor court, of which one is held in connection with each of the sixteen courts of appeal. Decisions in these matters are final, and there are no strikes or lockouts in Italy. The system, however, has two gross defects: first, it is controlled by the Fascist party which is, by unblushing admission, the only party in Italy; secondly, in the new electoral code of 1928, the syndicates were made the basis of the national electorate, thus providing not self-government for industry, but industrial government for all. The new revision, moreover, gave the Fascist grand council even greater powers than it formerly had had in controlling the nominations. According to the statement of Mussolini, the National Council is the "general staff, the functioning brain which draws up plans and coordinates all activities." Such was the plan which, in the mind of the Pope and his counselors, contained elements worthy of praise, but which in its practical working out substituted a bureaucracy in the place of private initiative.[5]

Economic Planning and Councils in America

We have had in our country within the past years a perfect "rain of plans," including the Chase plan, the Beard plan, the Swope plan, "America's Way Out," and the McGraw-Hill Platform for American Business. Some of these, as the last-named for instance, limit themselves to practical suggestions of immediate and possible application. The Beard plan bears a striking resem-

[4] See Clough, Shepard B., "The Evolution of Fascist Economic Practice and Theory," X HARVARD BUSINESS REVIEW 3, April, 1932, p. 302.

[5] The material given in this outline of European economic councils is taken from many sources, some of them purely personal, such as comment of individuals lately returned from Europe. The *Monthly Labour Review*, Vol. 32, #1, p. 1, contains a handy summary with much useful information.

blance to the actual accomplishment of Mussolini. The need for a plan is summarized by the Dean of the Harvard Graduate School of Business Administration in his *Business Adrift:*

> The time has come for a complete reappraisal of our attitude toward competition . . . Great monopolies with uncontrolled discretion are certainly dangerous and no democratic society is likely to allow them. Nevertheless the dangers of unbridled fair competition are just as great and unfortunately lack the popular appeal inherent in antimonopolistic attacks . . . The necessity for some method of making legal agreements which can stop senseless competition with its threat to the stability of established industrial groups and its shocking economic wastes is becoming more and more apparent.[6]

If anyone should think that in all this there is a note which he might describe as un-American, let him read the speech of Herbert Hoover, given as the presidential address to the Federated Engineering Societies in Washington, November 19, 1920. Mr. Hoover here declares that economic groups are an accepted part of our industrial equipment and that, if society is to go forward, they should be utilized for the solution of our problems. Or one might reread Mr. Hoover's paper in the *Nation's Business* for June 5, 1924, under a title which pithily expresses an important dilemma, "If Business Doesn't, Government Will."

> We are passing from a period of extreme individualistic action into a period of associational activity . . . Associational activities are, I believe, driving upon a new road . . . Therefore, they are not millstones for the grinding of competitors . . . I believe that through these forces we are slowly moving toward some sort of industrial democracy. We are upon its threshold if these agencies can be directed solely to constructive effort in the public interest.

[6] Donham, Wallace B., *Business Adrift.* New York: McGraw-Hill Book Co., Inc., 1931. P. 143.

Or, let the skeptic consider the statement of John D. Rockefeller, Jr., quoted in the *Proceedings* of the First Industrial Conference:

> Some form of representation in industry is essential in order to make personal relations possible under modern industrial conditions.[7]

The brief sketch of economic councils given above is designed to indicate that the field of national economic organization on representative lines is no longer confined to the realms of pure speculation. The existing bodies are faulty, being hastily constructed in some cases; in Russia certainly, in Italy almost as certainly, and perhaps in Germany, they contain elements which we should be extremely reluctant to transplant to the United States. Yet, as the encyclical points out, there is no reason whatever that the principles of democratic association cannot be applied to economics as well as to politics. In the beginning of modern democracy, there were many excellent people who stoutly maintained that no nation could govern itself. Yet, after a few painful experiments, and the more recent but passing post-war dictatorships, representative government has unquestionably come to stay. A peaceful evolution based on the ideas of the encyclical, namely a recognition of the social character of labor and property, a recognition of the associational character of human activity, and the erection of effective bodies representative of vocational and functional rather than geographical groups, is certainly to be preferred to revolution. And this revolution is otherwise, in the mind of the head of the largest religious body on earth, a certainty. By these means can be avoided, on the one hand, the

[7] *Proceedings*, p. 243.

meddling of a bureaucratic government and, on the other, the dangers of chaotic competition leading to destructive revolution.

The encyclical concludes this section with a plea for international cooperation in the solution of the larger problems of competition. In the field of finance some such step seems to be inevitable if we are to avoid erratic price changes and possible domination of business by private monetary interests. The Versailles Congress, the Geneva Conference, and the Young Plan all pointed in that direction. Mr. Snowden strongly urged it in his speech in Parliament introducing the bill suspending gold payments. Mr. Keynes has given us a momentous monetary treatise with international money as its crown. The report of the Committee on Amalgamations (London, 1920) expressed its fears that the Bank of England was losing control of the English money markets to private houses. The Federal Reserve Banks have confessedly followed, rather than led, the markets on certain occasions in recent years.

Conclusion

Here, then, is a practical need for international association. But how can this be brought about properly if we have no national bodies competent to represent all classes of industry? According to the encyclical we have courted disaster because we have failed to recognize that essential interdependence of men which modern industry accentuates. Capital cannot do without labor, nor can labor do without capital. Let them settle their differences in representative assemblies. One industry cannot do without another; let them plan their activities in a national economic council. One nation cannot do without another; let international differences be, at least, mitigated by conference between the accredited representatives of the democratic industry of each nation. To accomplish this, less damage need be done to our legal framework than has been done by any recent amendment. We can easily stretch our concept of what constitutes a contract in restraint of trade. We have done it often previously on less provocation.

An encyclical is addressed to the bishops of the entire world; therefore, it cannot descend to practical details, for national differences are too great. But the principles it lays down are, for the reasons given above, worthy of the earnest consideration of thoughtful American business men, who, mindful of their great responsibility, are concerned with defending our people from communistic revolution and bureaucratic evolution.

INTERNATIONAL CONTROL OF TIN ORE

By CLIFFORD L. JAMES

IN the midst of the present world-wide business depression when countless remedies and suggestions for improvements are being made, the year-old plan of the tin producers to alleviate their difficulties may be profitably studied. Like many other producers of staple raw materials of international trade, the tin producers were among the first to experience the ebb of prosperity.[1] As early as September, 1927, a persistent decline in tin prices began. During the next four years the tin producers of the world strove to cope with a major depression, first by financial mergers, later by voluntary curtailment of output, and lastly by international contractual agreement to restrict production.

World Production and Consumption of Tin

Consumers in the United States, however, have more than an academic interest in the production problems of the tin industry. The United States uses approximately half the world's annual supply of tin—in the automobile and tin-plate industries, and for tin cans, collapsible tubes, tin foil, solder, and certain metal alloys. But there are no tin deposits of appreciable value in this country and, even though the Tariff of 1922 offered a four-cent duty per pound whenever the output reached 1,500 tons per year, practically no tin has been mined in the United States.

Not only does the United States lack tin-ore supplies, but also, as the accompanying table shows, there is no tin-smelting industry in the country. The British Empire produces about 50% of the world's supply and smelts approximately 80%. In the United States during the World War some Bolivian ore was smelted, but the large amount of impurities made refining difficult and costly. High export duties on Malayan tin prohibited its use, and since 1923 the smelteries in the United States have been closed.[2] A few Americans have large invest-

TABLE 1.
PERCENTAGE DISTRIBUTION OF PEAK PRODUCTION AND CONSUMPTION OF METALLIC TIN, BY COUNTRY, 1929*

Country	Products of Mines	Products of Smelteries	Consumption of Crude Metal
British Empire	48	84	19
Fed. Malay States	36	53†	
Nigeria	5½		
United Kingdom	1¼	29½	19
Other British Possessions	5	1½	
Bolivia	23		
Dutch East Indies	18½	7	
Siam	5½		
United States	‡		49
Miscellaneous	5	9	32§
Total	100	100	100

* The percentages cited are based on statistics from the following sources: J. M. Keynes, J. W. F. Rowe, and G. L. Schwartz, *Stocks of Staple Commodities, Memorandum No. 24.* London: Royal Economic Society, 9, Adelphi Terrace, W.C. 2, 1930. P. 14.
American Bureau of Metal Statistics, *Year Book, 1930.* New York: 33 Rector Street, 1931. Pp. 114–15.
U. S. Department of Commerce, *Commerce Year Book 1931,* Vol. I. Washington, D. C.: 1931. Pp. 406–8.
League of Nations, Economic Intelligence Service, *Statistical Year Book, 1930–31.* Geneva: 1931. Pp. 136–37.
† Nearly all smelting is done at Singapore in the Straits Settlements which is outside the Federated Malay States.
‡ United States mined less than 1/10 of 1%, but supplied from scrap about 30,000 tons or ⅓ of its consumption.
§ Germany and France account for nearly half the miscellaneous consumption.

[1] A similar situation existed in the sugar industry. See James, Clifford L., "International Control of Raw Sugar," XXI *American Economic Review* 3, September, 1931, pp. 481–97. Control plans developed almost simultaneously in sugar and tin.

[2] Wallace, Benjamin Bruce and Edminster, Lynn Ramsay, *International Control of Raw Materials.* Washington, D. C.: The Brookings Institute, 1930. Pp. 244–46.

ments in the tin industry abroad, particularly in Bolivia, but the people of the United States are concerned mainly as consumers rather than as producers or investors.

Two general problems, then, emerge in a study of the international control of tin ore. First, from the standpoint of producers, how successful is the control plan as a method of industrial rationalization? Second, are tin consumers, especially in the United States, likely to be exposed to monopolistic price extortion under a successful control plan? The answer to both questions will be approached through an analysis of the crisis in the tin industry.

Crisis in the Tin Industry, 1927–29

Prior to 1927, the post-war price of tin, as shown in Table 2, rose steadily.[3] A brief recession in business conditions in 1920–21 arrested its advance and some speculative activity later disturbed it, but the general improvement in industry throughout the world carried the tin market upward. Because of heavy rains followed by drought in Malaya, where tin is dredged from alluvial deposits, and because of political disturbances in China, the production of tin ore showed a slight decline in 1926.[4] In the meantime the automobile and tin-plate industries of the United States were running at full capacity. In the autumn of 1926, "standard" tin sold for £320 per long ton in London and "straits" tin for 70¢ per pound in New York—the highest price since 1920.[5] So pronounced was the boom in the tin market that dealers discussed the possibility of rationing tin to those industries where its use was indispensable.

TABLE 2. TIN: WORLD POSITION*

Year	(In Thousands of Long Tons)			London Price "Standard" (per ton)	New York Price "Straits" (per pound)
	Production	Consumption	Stocks†		
1913	132	127	12	£206.28	$0.44
1919	123	118	15	257.60	0.63
1920	122	120	19	295.86	0.48
1921	110	105	25	165.27	0.29
1922	130	132	24	159.54	0.32
1923	129	135	21	202.25	0.42
1924	140	144	20	248.86	0.50
1925	145	154	18	261.08	0.57
1926	143	146	15	291.15	0.64
1927	158	155	16	288.95	0.65
1928	175	167	20	227.13	0.50
1929	188	181	26	203.85	0.45
1930	173	161	39	141.87	0.32
1931	146	125	60	118.37‡	0.24

* Statistics for the tin industry are only estimates, especially for production, consumption and stocks. The figures for the years 1919–23 are very doubtful, since stocks accumulated in the United States immediately after the War are not exactly known and since a tin pool composed of British, Malayan and Dutch interests held an unknown quantity. The table is based on the following sources: American Bureau of Metal Statistics, *Year Books 1923 to 1931, passim.* Keynes, Rowe, and Schwartz, *op. cit.*, p. 14.

Survey of Current Business. Washington: U. S. Government Printing Office. No. 66 (1927), p. 51; No. 90 (1929), p. 47; Annual Supplement December, 1931; January, February, March, 1932, issues, p. 38.

Metallgesellschaft (Frankfurt, Germany).

Engineering and Mining Journal, February, 1932, p. 126; March, 1932, p. 186.

† Figures for stocks and prices are monthly averages.

‡ The London price for 1931 is slightly inflated, since sterling after September 21 was not on a gold basis.

The reaction of the tin industry to famine prices was an immediate expansion in productive capacity. New tin companies were organized, and old companies extended their operations. The Malayan producers opened new mines and reworked old ones with modern electrical dredges.[6] The once-abandoned Cornish mines were reopened, and a new process to reclaim

[3] *See* Martin, Robert F., "World Stocks, Prices and Controls of Foodstuffs and Raw Materials," X HARVARD BUSINESS REVIEW 4, July, 1932, p. 430.

[4] *The Economist* (London), February 12, 1927, p. 58.

[5] "Standard tin" refers to several brands of good quality. It is slightly inferior to "straits tin" which is the product of first-class Malayan smelters. All prices are given for London in £ per long ton of "standard," for New York in cents per pound of "straits."

[6] U. S. Department of Commerce, Bureau of Mines, *Mineral Resources of the United States, 1928, Part I* (Washington, D. C.: 1929), p. 339.

Malayan Tin Dredges	1924	1925	1926	1927	1928
Operating.....	42	42	50	70	89
Under construction.	10	14	21	21	21
Proposed.....	10	35	23	23	9

tin ore left in residue from lode mining was applied. Railroad extension and highway construction progressed in the Malayan and Bolivian fields. American bankers estimated that $40,000,000 new capital was invested in 1927 in the tin industry.[7]

A crisis in the tin industry rapidly developed. Output increased substantially in 1927 and the following years, while demand persistently declined. Although prices moved downward, the market was not cleared of supplies, and tin stocks accumulated. The yearly average stocks, according to Table 2, rose from 16,000 tons in 1927 to 26,000 tons in 1929. For the same years the London price of "standard" tin declined from £288.95 to £203.85 per ton and the New York price of "straits" tin from 65¢ to 45¢ per pound. Expansion of the tin industry brought increased supplies onto the market when world consumption was declining. High prices had stimulated large investments, but the enlarged capacity, because of overhead costs, later became insensitive to changes in demand.

Mergers in the Industry

For many producers the low prices in 1928 cut deeply into profits, and a merger movement to lower costs through unified technical direction and coordinated marketing began. During the two years, 1928–29, practically all the important British interests were concentrated under the leadership of the London Tin Syndicate.[8] It was a holding company which fused with the Tin Selection Trust, which in turn was a holding company of the Anglo-Oriental Mining Corporation, the leading British tin-mining company in the Orient. Already the Anglo-Oriental Mining Corporation had absorbed the London-Malayan Tin Trust, a consolidation of sixteen Malayan companies, and the Associated Tin Mines of Nigeria, a consolidation of fourteen Nigerian companies. In addition to these and other tin interests in Malaya and Nigeria, the London Tin Syndicate had investments in Cornwall, Siam, Burma, and Japan.

The merger movement did not end with the consolidation of the British mining companies, however. During the same period four of the five important world smelting companies merged under one holding company, which associated the Patino Mines of Bolivia, as owner of one of the smelters, with the London Tin Syndicate and other British interests which owned the other three smelting companies.[9] A British-American Tin Corporation recently united British, Bolivian, and American interests.[10] In Bolivia the Patino group and the Aramayo Mines, controlled by the Guggenheim brothers, dominate the industry. In the Dutch East Indies, the remaining important source of tin, two Dutch companies, the Banka (government-owned) and the Billiton (partly a government enterprise), constitute practically the entire industry. Three large groups, then, the British, the Bolivian-American, and the Dutch, control commercially and politically almost the entire tin output of the world.

International Restriction Agreement in the Tin Industry, 1930–31

Although the centralization of financial control and technical direction ac-

[7] *Commerce Monthly*, Vol. 9, No. 11 (Publication of the National City Bank of Commerce in New York), pp. 12–15.

[8] *The Economist*, Vol. 109, p. 1255.

[9] *Ibid.*, p. 1200.

[10] *The Times* (London) March 9, 1932, p. 21.

complished many economies in the tin industry, prices continued to fall and profits to dwindle. More drastic action seemed advisable to prevent the ruin of a large part of the industry. During the merger movement, cooperation among the principal producers of the world for price pegging and restriction of smelter output had been urged by British companies. Some of the mergers were intended primarily to facilitate and promote concerted action on an international scale, but not until 1930 was an agreement reached. A Tin Producers Association, an organization formed by British interests in the summer of 1929, finally obtained the cooperation of other important tin producers of the world in a voluntary restriction of production for 1930.[11]

The voluntary restriction plan of 1930 was based on a gentleman's agreement among the various tin producers to curtail output immediately in a manner most convenient to them. There was no penalty for nonconformance and no government intervention. The Tin Producers Association suggested a cessation of mining work on Sundays and for one week in January and February. Most of the Malayan companies followed the time principle of restriction and closed on Sundays, as well as from January 25 to February 10. The Nigerian Advisory Council, which represented most of the Nigerian mines, agreed to restrict 20% on a tonnage basis. Bolivian restriction varied from 15% to 50% on a tonnage basis. In the Dutch East Indies the Banka Company promised to maintain the previous year's (1929) production rate, and the Billiton Company the average production for the last three years. Other small producers in China, Cornwall, Australia, South Africa, and the Belgian Congo supported the plan. Approximately 75% of the world's tin production was included in the restriction.

Although the attempt to curtail tin output immediately lessened production during the first quarter of 1930, prices continued to fall. A more definite, uniform, severe method of restriction appeared necessary. A general reduction of 20% in output on the basis of 1929 production, or the estimated production of a new plant in 1930, was adopted in April by all members of the original restriction group.[12] The increased curtailment of output was expected to reduce the yearly production 30,000 tons, instead of 24,000 as first provided. But consumption had been overestimated, and tin prices in July were at the lowest point since 1914. Accordingly the Tin Producers Association advised all members of the restriction group to cease mining for two months and to curtail output 20% for the remaining four months of the year. Not only did most of the members of the group comply with the revised plan, but also many nonmembers voluntarily restricted their production.

Results of the Restriction Agreements

What results were attained by the first year of tin restriction? Total world production declined about 15,000 tons in 1930 as compared to 1929, or one-half the reduction anticipated under restriction. Producers in Bolivia and Malaya curtailed their output approximately 6,000 tons each, Nigerian producers almost 2,000, Dutch East Indies 500, and other scattered producers about 2,000—a total of 16,500 tons. But producers elsewhere, particularly in Siam, increased their output about

[11] *The Economist*, Vol. 110, pp. 311–12.

[12] *Ibid.*, p. 897.

1,500 tons, which made the net reduction as stated above about 15,000 tons.[13] Restriction in 1930 was apparently neither inclusive enough nor sufficiently observed by large producers such as the Dutch East Indies.

Since consumption fell off about 20,000 tons in 1930 (see Table 2), prices did not improve under the first year of restricted output. Average stocks increased about 13,000 tons, while the average London price of "standard" tin declined from £203.85 to £141.87 per ton and the New York price of "straits" tin from 45¢ to 32¢ per pound. Producers, nevertheless, were encouraged by the fact that some reduction had been achieved and that prices probably would have fallen much lower without restriction. They were alarmed by the persistent decline in the industrial demand for tin as the general business depression became more acute, and they were ready to adopt a more comprehensive and more restrictive plan for the following year.

After some preliminary negotiations for a restriction of tin exports, a quota plan for curtailed production was adopted by the producers and governments of the Federated Malay States, Bolivia, Dutch East Indies, and Nigeria.[14] It provided for a total world output of 145,000 tons a year. Initial quotas were Malaya 53,853 tons, Bolivia 34,260 tons, Dutch East Indies 29,910 tons, Nigeria 7,750 tons, and nonparticipating countries 19,155 tons. Invariable percentages based on the initial quota for each country were agreed upon as the ratios applicable to all alterations of the basic tonnage. Quotas were to remain in force for six months unless urgent circumstances required change, but changes could be made at no shorter intervals than three months. The plan, which was to be administered by an international committee representing the interested governments, was to remain in force for two years beginning March 1, 1931.

Each government was to allocate its national quota among individual producers. Details of enforcement legislation in all four countries are not available. In Malaya, however, the measures taken to enforce the restriction were very severe.[15] Production is controlled by an assessment committee from whose decision there is no appeal. Certificates allocating permissible production are issued only for quota periods and are granted only to owners of land already mined or prepared for mining. Sales are permitted in accordance with the certificates issued. Penalties for nonobservance of the regulations range from cancellation of licenses and confiscations to fines of $2,000. Deliberate evasions are subject to fines of twenty times the value involved or a flat penalty of $5,000.

Although the new plan for tin restriction included 90% of the world's supply and proposed a 22% reduction in output in 1931 as compared to 1929, prices improved only temporarily when the plan became effective in March. Consumption declined more rapidly than output, and revised quotas adopted in June called for an additional reduction of 20,000 tons, or a total reduction for the participating countries of 33% in 1931 as compared with 1929.[16] The revised quotas

[13] "Tin and Tin Restriction," *Rotterdamsche Bankvereeniging Monthly Review*, December, 1932, p. 315. League of Nations, *op. cit.*, p. 136.

[14] *The Times*, March 2, 1931, p. 20.

[15] *Commercial and Financial Chronicle*, Vol. 132, p. 2480.

[16] *The Economist*, Vol. 112, pp. 1109–10. The new quotas were Malaya 45,355 tons, Bolivia 28,818 tons, Dutch East Indies 25,159 tons, and Nigeria 6,512 tons.

remained in force until the end of the year.

Buying Pools, Statistical Improvements, Etc.

Several other important changes occurred in tin restriction during the last half of 1931. In August a tin pool was formed to buy up 20,000 to 25,000 tons of tin stocks and to hold them until the London price reached £150 and remained there for one month, when a release of 5% was authorized. After Great Britain had suspended the gold standard, the first release price was later increased to £165. Purchases by the pool boosted prices temporarily, but not enough to permit any releases. At the end of the year, the pool held about 20,000 tons of the world's visible supply of tin. In order to allow for liquidation of the pool's holdings, the participating countries agreed to continue the restriction scheme to August, 1934 instead of February, 1933.[17]

Since the statistical data for the tin industry varied widely, the International Tin Committee recommended more adequate compilations. Many producers believed that difficulties frequently appeared because of insufficient and inaccurate statistical information. Late in the summer a plan for the collection of "agreed statistics" was adopted. At the same time proposals were made for research to promote the use of tin, but funds were not available until January 1, 1932, when about $100,000 was set aside for research.[18]

Another change included the adherence in September of Siam to the restriction plan. Its output was limited to 10,000 tons for the year 1931, instead of the anticipated output of 12,000 or 13,000 tons. Total tin production, then, of the countries under restriction was finally reduced to about 115,000 tons for 1931. Nonparticipating countries were expected to produce not more than 8,000 tons, which would make a world total of 123,000 tons for 1931.[19]

The results of the second year of tin restriction, which was compulsory for most producers after March 1, 1931, appear in part in Table 2. Total world output of tin for the year was approximately 146,000 tons, or 27,000 tons less than in 1930. While the reduction was substantial, it exceeded the anticipated output under the restriction plan by at least 20,000 tons. Consumption, moreover, which was expected to total about 150,000 tons, was only 125,000 tons, or 36,000 tons less than in the previous year. Average monthly accumulated stocks rose from 39,000 to 60,000 tons, and prices in New York fell from 32¢ to 24¢ per pound.

The failure to show the reduction in output planned may be partly attributed to assessment difficulties (particularly in Malaya), partly to the delay in making the scheme effective (March instead of January), and partly to increased production in nonparticipating countries, or perhaps smuggling through nonparticipating countries. For example, in Malaya, where there are 1,500 mines or more, individual assessment of production is difficult; the quota for the country was exceeded, and a domestic supercut was instituted.[20] The Government purchased

[17] *The Times*, December 19, 1931, p. 17.

[18] *Rotterdamsche Bankvereeniging Monthly Review*, January, 1932, p. 321.

[19] An additional cut of 15,000 tons was made in November, but it did not become effective until January 1, 1932. At present (August, 1932), another cut of 17,040 tons has been made.

[20] *The Economist*, Vol. 113, August 29 and November 7, 1931, pp. 405, 868–9. Also Vol. 116, April 2, 1932, p. 749.

the excess, but production was not within the quota until late in the first quarter of 1932. The same situation existed to a less degree in the other participating countries. The delay, moreover, in making restriction compulsory allowed producers to unload supplies on the market during January and February of 1931. Finally, production in nonparticipating countries increased slightly either directly, or indirectly because of smuggling from countries under the restriction plans.

On the basis of the above data, it is evident that compulsory restriction of tin production failed to adjust supply immediately to demand and thus failed to prevent a further decline in price. Most of the producers, however, maintain that prices would have been much lower with unrestricted production. How much lower, no one can ascertain. Many producers show satisfactory profits, which they attribute largely to the economies made imperative by restricted output and to the price maintenance made possible by restriction.[21] At any rate the tin industry now seems fully committed to several more years of restriction.

Producers vs. Consumers of Tin

From the above brief discussion of the development of tin restriction, no dogmatic answers can be derived for the questions proposed earlier. Not only is the statistical information inadequate, but also the period of experimentation with tin restriction is too short to constitute a conclusive test of its salient features. Some general and tentative observations, however, will be ventured as regards the position of producers and consumers under the tin-restriction plan.

[21] *Ibid.*, p. 1193.

If the international restriction of tin output is judged as an emergency stabilization measure to assist tin producers during the present economic depression, its success is extremely doubtful.[22] Although restriction quotas were revised downward several times, production continued to exceed consumption. The excess was partly the result of assessment difficulties among individual producers in quota countries and partly the results of increased output among small producers in nonparticipating countries. But equally important, if not more so, in an explanation of the continued excessive output, was the failure to act quickly and to gauge more accurately future consumption. Even a very drastic cut in production would probably not have prevented lower tin prices, since general prices were falling rapidly. But more effective restriction would have made the transition stage to lower costs and prices less chaotic. Restriction, and particularly the buying pool, several times arrested momentarily the decline of tin prices. But, in view of the large accumulated stocks and their depressing effect on the market, the claim of many producers that prices would have been much lower without restriction is quite problematical.

Future Prospects for Restriction

What are the future prospects for tin restriction from the standpoint of the producers? They intend to retain the plan for several years and possibly to renew it. It may, therefore, be examined as a permanent device for the organization of an international

[22] *The New York Times*, April 24, 1932, Sec. III, p. 1. Other control schemes show the same weakness. A general survey of tin production by the U. S. Department of Commerce will soon appear—to be known as *Economic Paper 13*.

industry. When scrutinized on this basis, several favorable factors emerge.

First of all, the tin-restriction plan is likely to remain in operation for the stipulated period and even longer. It was preceded and accompanied by a widespread financial integration of the tin industry which insures effective cooperation among the participating international groups.[23] Otherwise the divergent economic interests represented by different production costs, types of mining, stages of development, and labor and political conditions in the various countries would make continued restriction precarious. Further stability is added by the fact that all the important producing areas are now included in the plan and that it may be revised at frequent intervals to adjust quotas to changing conditions.

In the second place, tin restriction as a permanent plan for the industry offers the producers an opportunity to rationalize their production. The provision for the collection of adequate statistics and research as to the uses of tin is an excellent initial step. Not only will the industry know more accurately at any given time its statistical position, but also it will be enabled to make statistical forecasts of output come true. Since the actions of producers are unpredictable, statistical forecasts of future output are unreliable without controlled production. If advised to curtail output because of forecasted excessive supplies and lower prices, some producers, unless restrained by common agreement, will increase their output to take advantage of possible reductions by competitors. A controlled tin industry, therefore, has only one unknown to solve, namely consumption.

The prediction of tin consumption involves the forecasting of future general business conditions and offers the supreme test, as well as opportunity, for a permanent plan of control. It presents the problem of whether or not one industry can disengage itself from the recurring fluctuations of business cycles. Complete stability of one industry does not seem possible so long as general business fluctuations retain their present severity. Their alleviation through changes in banking and credit, saving and investing, profits and wages is essential.

In the meantime, however, a permanent control plan in the tin industry can lessen for the producers the shocks of general price changes by checking excessive expansion each time prices rise and by compelling immediate retrenchment when prices fall. The accumulation of moderate stocks will permit an adjusted flow of supplies to the market. Any successful restriction plan, therefore, must be a permanent plan of adjustment. For tin restriction to be effective now, it should have been in operation during the expansion of 1927.

The Consumer's Point of View

Consumers of tin should not be neglected in a discussion of restriction plans. A world tin monopoly might benefit producers to the detriment of consumers. At present consumers have no cause for complaint, since tin restriction, as stated above, had little effect on price. In fact, most of the large industrial users of tin were sympathetic to the development of a control plan, since greater price stability would help them avoid losses on tin inventories.

[23] Domeratzky, Louis, "Cartels and Business Crisis," x *Foreign Affairs* 1, October, 1931, pp. 34–53. Mr. Domeratzky, expert on cartels for the U. S. Department of Commerce, considers financial integration indispensable to successful international industrial agreements.

The future interests of consumers under a permanent tin-control plan present a different problem. On a rising price level a control plan might be used to extort monopoly prices from consumers. But is serious extortion likely? No. Industrial users, as well as ultimate consumers, could shift their demand to substitute products and could utilize more tin scrap.[24] But equally important as a protection against price extortion is the fact that producers themselves would find excessive prices ruinous to their control plan. Such prices would not only stimulate the few outside producers to expand their output, but also they would probably cause low-cost participating producers to withdraw from the plan. A price policy, therefore, which proved permanently successful for a world tin monopoly, would not unduly burden the consumers.

If consumers generally became apprehensive of the control plan, several remedies would exist. A representative of the consumers could be added to the International Tin Committee to promote better relations between producers and consumers. The economic section of the League of Nations usually investigates international industrial agreements; it could publish information on tin restriction and thus develop public opinion to safeguard the interests of consumers.

The interests of consumers in tin restriction do not end with the statement that price extortion is unlikely. A permanent control plan offers the possibility of positive gains to consumers through a more moderate exploitation of tin resources. Although authorities disagree as to the total accessible tin deposits, many believe that two or three decades of utilization at the present rate will leave them nearly depleted. Without controlled production, competing enterprises tend to exploit their properties rapidly—regardless of low prices—because of heavy interest charges on their large fixed investments. A permanent control plan could curb excessive exploitation and promote conservation of tin resources.

Another possible gain for consumers from controlled tin production appears in the prospects for greater efficiency through more rational contraction and expansion of production. Unrestricted competition is assumed to promote the highest efficiency, since only the fittest enterprises are thought to be able to survive. But business survival may result from technical superiority of production, more effective selling methods, or merely influential financial connections. True enough, restriction of output may sometimes increase the unit costs of efficient large-scale enterprises as well as keep in operation inefficient marginal firms. On the other hand, however, the more efficient enterprises frequently overcome such handicaps through greater efforts to economize, and the inefficient marginal enterprises which are disclosed by a business depression sometimes represent temporary excess capacity which will be needed in the near future. Decapitalization, of course, either with or without restriction of output will prevent a physical abandonment of all excess mining capacity during a business depression, but restriction assists decapitalization and preserves more excess capacity. Additional capacity saved by restriction during a depression will militate against excessive prices later and thus subdue the stimulus to recurring overexpansion.

[24] U. S. Department of Commerce, Bureau of Mines, *op. cit.*, pp. 333–34. For example, waterproof cartons, glass jars, or lacquered steel might replace tin cans.

STOCK DIVIDENDS

By SEYMOUR N. SIEGEL

THAT many of the corporate practices of the 1929 boom period were unfortunate has been amply demonstrated. Split-ups, issuance of rights and other capital-inflating devices have all left their residue of disillusion and disappointment. High anticipations and the capitalization of future possibilities have been proved extremely premature. Probably one of the outstanding necessities for recent dividend omissions has been large share capitalizations. Expansion of capital structure has resulted in subdividing ownership to such a degree that low share prices have been the consequence, independent of unsatisfactory earnings and business conditions.

One of the most popular methods with corporation executives for stimulating speculative imagination and for whetting popular appetite for equities has been the issuance of stock dividends. "Cutting a melon" by declaration of a 100% stock dividend was characteristic of the early months of the past decade. More recently there has been the growth of a regular stock-dividend policy in place of the better-known cash disbursement.

Can the tailor-made capitalizations of a boom period satisfactorily meet the ruthless realities of a depression? Does the investor actually receive any additional value when he is presented with a stock dividend? If he does, is his return greater than if he were to receive a cash dividend? Is it possible for such a corporate policy, as the issuing of regular stock dividends, to continue indefinitely without sooner or later irreparably damaging stockholders' equity? What effect has the issuance of additional shares upon the market movements of the stock? These are some of the questions that this study attempts to answer.

The Effect of Dividends on Share Values

Dividends have rightly been described as the return paid by corporations on their common stock. They represent partial profits of the business. Since, theoretically, they are dependent upon earnings, they are in no way definite or certain.

When a stockholder is paid a dividend, he generally feels that he is "getting something," that his net worth is being increased by the amount of that dividend. If it comes in cash, he gets the cash; if it comes as a stock dividend, he feels that it can easily be sold and turned into cash. Since he still has his original stock certificates, he is very likely to assume that his real wealth has been increased by the value of the dividend he has received.

A little reasoning, however, will easily show the fallacy inherent in such a belief. As Schabacker[1] rightly puts it, "The common stockholder is a part owner of his corporation and of all its surplus wealth and equity, after allowing for the current and fixed liabilities, including bonds and preferred stock which have a prior claim on his company's resources. After such claims are satisfied, however, the residual wealth and assets of the corporation are his in direct proportion to the

[1] Schabacker, Richard W., *Stock Market Theory and Practice*. New York: B. C. Forbes Publishing Co., 1930. P. 348.

percentage of total outstanding common stock which he holds. The prior claims of other liabilities are definite. The equities for his common stock are indefinite. They are the 'balance' of the company's assets over its liabilities—in a simple form, they are the profit or loss surplus of his corporation. It is clear that any profits which the company makes will go to increase this surplus equity in the common stock, just as any losses or payments which the company makes will go to reduce this surplus, this balance, this equity, this true theoretical value of the common stock."

It seems quite obvious that if a corporation refrains from disbursing a share of its profits, such profits will tend to increase the equity back of the common stock. They will theoretically add to the basic value of the shares. If, however, the corporation presents a portion of its net earnings to the stockholder in the form of dividends, it is perfectly plain that the company no longer has such moneys in its treasury and that the equity behind the common stock is lowered by exactly the amount paid out. As profits are accumulated, the worth of a corporation's capital stock is increased to the holders thereof. On the other hand, when a dividend is declared, the worth of the stock is lowered to its owners by precisely the amount of such dividend. This principle is illustrated in the securities market when a stock sells "Ex Dividend"; at that time the market price, theoretically, declines for the amount of its dividend.

This study is concerned primarily with a stock-dividend policy. A stock dividend is additional stock issued by a corporation in lieu of cash and is payable to old stockholders. Regular stock dividends, therefore, are merely dividends paid in stock at regularly determined periods. To take a hypothetical case; if a certain issue is on a 2% stock-dividend basis, each stockholder would receive $\frac{2}{100}$ of an additional share annually.

"Cutting a melon" refers to the corporate practice of declaring stock dividends on special occasions. When the directors of a company feel that a sufficiently large surplus has been built up, the desire to please the stockholders may result in the declaration of a 100% stock dividend. This would be equivalent to splitting the capital stock on a two-for-one basis.

The chief advantages of a regular stock-dividend policy have been ably set forth by Mr. Dame:[2]

(1) Providing an automatic method of financing reasonable in cost, without burden to the stockholder, to meet the needs of expansion—particularly necessary in the public-utility business.

(2) Giving a satisfactory return to the stockholder—maintaining his proportionate interest in case he retains his dividend stock, or, in case he sells, safeguarding an equity valuable in a growing and stronger concern.

(3) Enabling the stockholder to choose between cash and investment, the former by immediately and easily cashing his stock dividend, with no loss save abandonment of potential profit; the latter by keeping his stock dividend and retaining his proportionate interest with potential profit. The second course is identical with the principle of wise investment—the immediate reinvestment of dividends and interest. This the stockholder can do without the payment of funds in addition to dividends, which so often is necessary in exercising rights to subscribe to stock, a system long in vogue among companies paying cash dividends.

Probably the most important advantage of the payment of a stock dividend

[2] Dame, Frank L., "North American's Dividend Policy," *Barron's Weekly*, June 22, 1930, p. 26.

by a corporation is the saving of its cash resources. A rapidly expanding company has need of most of its actual cash, and the profits in any business are not always necessarily liquid. In order to disburse cash, the company may have to make some sacrifice to convert its assets into cash and thus be in a position to mail dividend checks.

To the stockholder, the stock dividend is the short cut to increased value of investment holdings without the outlay of additional money. "He has complete protection and automatic reinvestment—cash available if he wants it."

The New York Stock Exchange has refused to list stock issued as a stock dividend when its cash value has exceeded the earnings for that period.

It seems, however, that it is much easier to observe the relationship between earnings and cash dividends than between earnings and stock dividends. Comparatively simple it is for a corporation to issue more stock without the stockholders' realizing offhand precisely how much earnings or share values are reduced by such an action. In fact, the reduction in surplus may not be noticeable until the issuance of the company's annual report. It is a temptation, therefore, not easily overcome, for a board of directors to declare a dividend in stock at a higher rate than would normally be the case if payment were made in cash.

"The insidious element in paying dividends in stock," writes Mr. Schabacker,[3] "lies in the fact that in order to keep earnings per share at an equal amount each year, total earnings must be increased at a greater rate each year, since each succeeding year sees a greater number of shares among which total profits must be divided." So long as general business activity is expanding and earnings are on the increase, all goes well; if profits diminish, however, as in a period of depression, earnings per share tend to decline at a geometric rate due to the increasing number of shares outstanding.

Actual Return in Value of a Stock Dividend

In determining whether an investor receives any additional value when he is presented with a stock dividend, three lines of argument will be followed. The legal point of view has been very well summarized in two Supreme Court decisions.[4] Most of the legal reasoning centered in the attempt of the Collector of Internal Revenue to enforce the payment of income taxes on stock dividends under the 16th Amendment. The Revenue Act of September 8, 1916, made plain the purpose of the Congress of the United States to tax distributions of all kinds made by any corporation as income.

In both these cases, the Supreme Court characterized a stock dividend as follows:

> A stock dividend really takes nothing from the property of the corporation and adds nothing to the interest of the shareholders. Its property is not diminished and their interests are not increased . . . the proportionate interest of each shareholder remains the same . . . the only change is in the evidence which represents that interest . . . the new shares and the origional shares, together, representing the same proportional interest that the original shares represented before the issue of the new ones.[5]

[3] *Ibid.*, p. 362.

[4] In *Gibbons* v. *Mahon*, 136 U. S. 549, 560, cited in *Towne* v. *Eisner*, 245 U. S. 418 (1918). *Eisner* v. *Macomber*, 252 U. S. 189 (1920).

[5] *Logan Co. et al* v. *United States*, 169 U. S. 255, 261 (1898).

In short, the corporation is no poorer and the stockholder is no richer than each was before. The conclusion reached as to the essential nature of a stock dividend necessarily prevents its being regarded as income in any true sense.

Court decisions have elaborated upon the definitions of and distinctions between capital and income. Lucid explanations have been attached to the two Eisner cases mentioned previously. Various authorities upon economics and economic theory have been quoted to show the fundamental relation between capital and income. Mr. Justice Pitney likens capital to the "tree or the land,—income, to the fruit or the crop." The former might be depicted as a reservoir, the latter as the outlet stream, to be measured by its flow during a period of time.

After examining dictionaries in common use, one finds that there is little that differs from the definition of income as succinctly defined in two cases arising under the Corporation Tax of 1909.[6] At that time the Court said, "Income may be defined as the gain derived from capital, from labor, or from both combined." It must be understood that it includes any profit gained through a sale or conversion of capital assets.

Income is not a gain accruing *to* capital but a gain proceeding *from* the property, *i.e.*, "*derived*" from the property. This same fundamental conception is set forth in the 16th Amendment itself—"Income, from whatever source derived." The Courts have attempted to find out whether a stock dividend can be brought within this definition.

Certainly the interest of the stockholder is a capital interest, which is evidenced by certificates of stock. Such certificates indicate the number of shares, their par value, and the method of transfer. There is undeniable evidence that the owner has contributed capital to the business enterprise. He is entitled to vote at stockholders' meetings, to receive a share of the profits if and when they are earned and declared. In liquidation, he is entitled to a proportionate share of all the assets after prior liens have been paid. Unless liquidation takes place, or until the Board of Directors declare a dividend, the stockholder has no right to draw an iota from the capital or surplus of the business. "On the contrary," say the Courts, "his interest pertains not to any part, divisible or indivisible, but to the entire assets, business, and affairs of the company . . . If he desires to dissociate himself from the company, he can do so only by disposing of his stock."[7]

In its balance sheet, the company admits a liability to stockholders equal to the total par value of their stock. This is set up in what is known as a "Capital Stock Account." Past undivided earnings are also set up as a liability in the form of "Surplus." The stockholders, individually or collectively, have no right or claim against any particular portion of the assets unless the directors separate such assets and decide to pay a dividend. (Normally such dividends are payable in money.) Only then does the stockholder derive "income" from the capital he has invested.

When a company issues new shares as dividends, it increases its outstanding capital stock by the amount of the

[6] *Stratton's Independence* v. *Howbert*, 231 U. S. 399, 415 (1913).

[7] Hearings before the Committee on Ways and Means, March 18–19, 1920, p. 10.

par value of such shares. It can be seen that the company's net worth is not affected. There has been no addition to, nor subtraction from the assets, nor has the company incurred or paid off any debt.

There is a decrease in surplus, by the amount of the par value of the new shares only, because the capital stock has encroached upon this part of the unchanged net worth and has reduced the excess of the latter to the extent of the value of the new shares. Not only is this a bookkeeping necessity, but it is a legal requirement as well. Only when there is a preexisting surplus, amounting to at least the par value of the new shares, can the stock dividend be considered lawful. In other words, new stock may be issued only by the cancellation of an amount of surplus equal to this par value. This cancellation, in the view of the law, is the payment for the new stock. If the par value of a stock dividend is paid instead as a cash dividend, the effects would obviously be different. In that case a corporation actually alienates its assets by such an amount, while its capital-stock account remains the same. Because of the shrinkage in net worth, the surplus would contract. When a stock dividend is issued, the contraction in surplus is produced by the expansion of the capital-stock liability.

It seems to be a common impression that cash dividends are paid out of surplus. Stock dividends are also paid out of surplus. Whitaker[8] says, "We must bear in mind that cash dividends are paid out of the assets of a corporation and stock dividends are not. If a corporation pays out assets, it reduces its surplus. If it increases its capital stock by diluting it with free stock, it also reduces its surplus, but the two actions are different. We are not concerned with the mere formalities of bookkeeping. The balance sheet shows financial actualities."

Past profits may so increase the surplus that it becomes far greater than the par value of the common stock. By declaring a stock dividend, an adjustment may be made upon the books of the company. This, however, is no more than a book adjustment, in essence not a dividend, but rather the opposite; no part of the assets of the company is separated from the common fund, nothing distributed except paper certificates that evidence an antecedent increase in the value of the stockholders' capital interest, resulting from an accumulation of profits by the company, but profits so far absorbed in the business as to render it impracticable to separate them for withdrawal and distribution.

When such an adjustment is made, it is necessary to debit the Surplus Account in order to credit the Capital Stock Account. This is quite obviously a pure bookkeeping transaction. It does not affect the aggregate assets of the corporation or any of its liabilities. The only change seems to be in the *form* of the liability acknowledged by the corporation to its own stockholders. It does not alter the preexisting individual interest of any shareholder or add to the basic value of his holding. New certificates may increase the number of shares outstanding, but it can plainly be seen that the value of each share is consequently diluted.

A stock dividend capitalizes a company's accumulated profits instead of distributing such profits to shareholders. "Far from being a realization of profits to the stockholder, it tends rather to

[8] Whitaker, A. C., "The Stock Dividend Question," XIX *American Economic Review* 1, March, 1929, p. 20–42.

postpone such realization, in that the fund represented by the new stock has been transferred from surplus to capital and no longer is available for actual distribution. A stock dividend dedicates surplus permanently to the business."[9]

The essential and controlling fact, according to the Macomber case, is that the stockholder receives nothing out of the company's assets for his own use and benefit. On the contrary, every dollar that he originally invested, together with whatever additions and accumulations may have resulted by reason of the employment of his money by the company, still remains the property of the company. His investment continues to remain subject to ordinary risks of business and it may well be dissipated. He has received nothing that might answer the definition of income within the meaning of the 16th Amendment.

The immediate adjustment in market evaluation, after a stock dividend has been declared, logically proves that a man who gets a stock dividend does not get any addition to his possessions. Hypothetically, if Mr. A. buys 100 shares of XYZ stock on April 1 at $200 a share, and a 100% stock dividend is declared on April 2 to holders of record April 10, the stock will theoretically sell for 50% of its market quotation the day before it is sold "Ex Dividend." In other words, the stock will sell at $100. Has an income of $100 been derived? Emphatically, no!

So long as the recipient holds on to his stock dividend and does not sell it, he has received no income. A very good comparison might be the case of an increase in value of a piece of real estate. Such increment does not become income until the property is sold. It is true that a high market valuation may create the temptation to convert the stock dividend into cash. This reduces the shareholder's proportionate ownership and correspondingly dilutes his equity. Split-up stock may sell for more in the securities market, but that is because the market is full of delusions.

[9] Whitaker, A. C., *ibid.*, p. 25.

An Examination of a Regular Stock-dividend Policy

For the purposes of this study, the North American Company's regular stock-dividend policy will be presented and examined. Although there are several companies which have at one time or another pursued a regular stock-dividend policy, this study will concern itself with the North American Company because this company has pursued a policy of paying regular stock dividends of 10% annually from 1923 to date. At the rate of 2½% quarterly in stock, holdings practically double every seven years. The year-to-year increase of an original holding of 100 shares, allowing such stock dividends to accumulate, is visibly portrayed by the following table:

At the End of:	
First year	110.35 shares
Second year	121.75 shares
Third year	134.33 shares
Fourth year	148.22 shares
Fifth year	163.55 shares
Sixth year	180.48 shares
Seventh year	199.15 shares

The growth of the public utility business has been phenomenal. It has increased in most properties at a rate in excess of 10% annually. The financing of these public utilities probably cannot be done exclusively by the issuance of bonds or preferred stocks. It is an accounting necessity, as well as a desirable policy, that a certain

amount of the capital be provided by common stockholders. It, therefore, has been necessary for public utility companies to increase their issues of common stock from time to time, and those increases usually have been accomplished through offerings to their stockholders. Companies which have increased in about the same proportion as the North American Company properties have issued additional common stocks, in order to provide their financing in about the same magnitude as the increase in the number of common shares of the North American Company by its dividend policy.

The North American Company holds that a regular stock-dividend policy is superior to the general corporation practice of raising needed capital by issuing rights for additional stock from time to time. Regular stock dividends are in effect the same as cash dividends plus rights, but afford the stockholder the equivalent of more frequent and convenient subscription privileges. Either method results in an increase to a company's outstanding capital stock. Studying the increase in stock of several public utility companies which paid cash dividends and gave rights, more or less regularly, during the seven years 1923–1929, an average addition of over 175% to outstanding stock took place. If the North American Company's stock increase of 154.6% for several years, ended December 31, 1929, is compared with the following tabulation, it can be seen

Name of Company	*% of Stock Increase*
Public Service Corporation of New Jersey	360.7
Detroit Edison Company	237.0
Pacific Gas & Electric Company	175.4
Commonwealth Edison Company	125.7
American Telephone & Telegraph Company	89.1
Southern California Edison Company	63.2
Average	175.2

that this dividend policy did not create an excessive comparative capitalization.

The two methods of raising capital do not reduce the strength of the stockholder's equity so long as he retains the additional stock. It has been shown, however, that the sale or disposition of such stock dilutes the stockholder's equity. It may be that a regular stock-dividend policy, making it easier for the stockholder to accumulate his dividends and not be under the necessity of investing additional capital (as in the case of rights), acts as a favorable influence toward maintaining such equity. On the other hand, it is pointed out that the temptation to convert the stock dividend into cash is always present. Sometimes, however, the necessity for producing a large additional amount of capital, which cannot be satisfactorily obtained by the stock-dividend method, necessitates the use of rights.

The argument is advanced that it is more convenient for the stockholder to expect a distribution quarterly, at the regular rate of 2½% in North American stock, than to have 10% or more in rights offered in one block at irregular intervals. At such times it may not be convenient to provide the necessary cash to exercise these rights.

The sale of North American stock dividends resulted in a cash return to the stockholder far in excess of actual per-share earnings of the company. From the conservative standpoint of good accounting, a corporation should not pay out in dividends on its stock in any one year more than 60% of its net profits for that year. It is obvious that in the case of the North American Company the stockholder would have received in cash, if a cash dividend policy had been pursued, far less than

he did receive had he sold his stock dividends. It may be argued that this excess return compensates for the diluted equity which takes place when the stock is sold. In actual cash, however, this is far from true; depending upon the vagaries of the market, it may be more or less than the diluted book value.[10]

Adalbert Wolff[11] says, "The most provocative feature of the entire subject is the difference between earnings per share and the amount which a stockholder can realize through the sale of his dividend stock in the market." During the year 1931, the company earned $3.29 a share. Yet, if the 10% annual stock dividend had been sold, a cash return of $6.60 would have been received by the stockholder. "This paradox," says Mr. Wolff, "is a fruitful source of argument."

To an investor whose chief need is to obtain a constant cash return, there is always present the perplexity of not knowing the exact amount of dividend. The uncertainty of the declaration of any dividend at all is true of all common stocks, especially during a period of stress.

One of the necessities in successfully continuing a regular stock-dividend policy is an assurance of an expanding market for the common stock of the company. The issuing company must make available at all times to its existing common stockholders, desiring cash income in place of dividend stock, a ready market for such stock. At the same time it facilitates the financing of itself and its subsidiaries by a stock-dividend policy.

Assets and Stock Dividends

Since North American Company common stock increased 122.24% from December 31, 1924, to June 30, 1931, and book value increased 321.55% during the same period, the argument is advanced that there was sufficient addition to assets to compensate for the dilution of the capital account.

The total common stock outstanding for the North American Company on December 31, 1922, had a par value of $21,085,800 and on December 31, 1929, a stated value on the same basis as the former par value of $56,038,390, an increase of $34,952,590. Of this increase, $24,907,187 was due to stock issued as dividends on the stock outstanding December 31, 1922, as well as dividends on all stocks subsequently issued for all purposes up to the end of the period. In other words, 71% of the total increase in common stock since 1922 represents the reinvestment of earnings of common stockholders through stock-dividend payments.

In spite of the increase in common stock during the period, the proportion of the North American Company's common stock to total capitalization of the company and its subsidiaries did increase, but decreased from 10.4% on December 31, 1922 to 8% on June 30, 1931.

It is claimed that there has been no diminution of asset value as the result of the North American Company's dividend policy, and this is illustrated by the following table:

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[10] In the year 1929, North American stock, selling at an average of $120 a share, earned $4.82 per share. If the stock dividends were sold, a cash return of $12.08 was obtained. If 60% of earnings were paid, the cash return to the stockholder would not exceed $2.89. The excess, therefore, of $9.19 is composed of: (a) $2 diluted equity (book value $21.95 before stock dividend is paid minus book value of $19.95 after payment of stock dividend); and (b) $7.19, the result of the general market appraisal of the value of the stock.

[11] "Periodic Rights and Stock Dividends," *The Annalist*, August 31, 1928.

Year	Average Number of Shares Outstanding	Consolidated Earnings	Consolidated Earnings per Share	Consolidated Book Value per Share	Percentage of Earnings per Share to Book Value per Share
1923	2,293,855	$ 8,242,436	$3.59	$16.43	21.85
1924	2,778,393	9,237,823	3.32	17.80	18.65
1925	3,084,561	11,532,491	3.74	24.68	15.15
1926	3,884,893	15,743,400	4.05	26.12	15.51
1927	4,290,908	17,434,626	4.06	26.65	15.23
1928	4,820,476	22,582,721	4.68	29.70	15.76
1929	5,361,602	26,986,790	5.03	32.37	15.54
1930	5,962,915	27,003,086	4.53	33.67	13.46
Average.....	4,059,700	17,345,421	4.12	25.93	16.39

Whether or not such dilution is justified or compensated for, does not appear to be the point. The fact remains that there has been dilution. How much greater would have been the individual increase in per-share book value had there never been the 122.24% increase in common stock? It remains a moot question as to what percentage of the tremendous increase in book value was due to superior management and what percentage to increased capital, obtained by means of the stock dividend.

It is conceivable that a decline in earnings and in book value, in the face of continued annual issuance of 10% in stock, would make the dilution more obvious, if not more glaring.

Up to 1930, the company averaged net profits of more than 16% of its common stock and surplus. The argument is advanced that, if the company can consistently produce as high a return as 16% a year on its common-stock equities, there should be no question about the soundness of diluting such equities to the extent of 10% a year. However, the recent decline in earnings, compared to the increased capitalization, results in a ratio which, if such earnings trend continues very much farther, will not allow the capital structure to stand the strain of a continuance of such severe and constant dilution.[12]

This study is not concerned with hypothetically suggesting what earning power could be developed in a company if a stock-dividend policy were discontinued and if the number of shares outstanding were held at a constant level. That would bring up the question of how the company might obtain new common-stock equities necessary to balance its constantly expanding capital structure. Wolff has assumed that it would bring up the same fundamental problem and would probably generate the necessity for the issuance of rights.

It seems that the stock-dividend policy of the North American Company has the effect of increasing its investment account or assets. If the time came when the North American Company could not reinvest those earnings, or could not reinvest them well enough

[12] Commonwealth Edison showed an earning power of 8.1% of earnings per share to book value per share. Pacific Gas & Electric showed 8.7%. People's Gas, Light & Coke showed 7.1%. American Telephone & Telegraph showed 6.6%. Apparently no one of these companies could afford to dilute its equities by as much as 10% per annum. It seems quite plain that the success of any stock-dividend policy is dependent upon a continuation of high earning power, which becomes increasingly difficult with the continued increase in the number of shares outstanding.

to obtain a high return, the stock-dividend policy could not very well be maintained. Cash would accumulate which could not be profitably invested, and this would require either a policy of cash accumulation or its distribution to stockholders as cash dividends. Its mere accumulation would not earn anything for the company, and might not allow maintenance of its dividend policy or even the payment of a cash dividend. If the company relies upon its earnings to make improvements instead of issuing new shares, it is liable to develop a policy of making extensions during illogical times; *i.e.*, at periods of high costs.

Effect on Market Prices

In determining the exact effect of stock-dividend policies on market value, there are several difficulties in obtaining exact measurements. Occasional stock dividends are usually declared during periods of rising prices. These market prices have as their genesis three important factors:

(1) Earnings may be increasing and usually are increasing (especially where a regular stock-dividend policy is being pursued).

(2) The actual dividend payments might be increased by a higher rate on the new stock than is intended to equal the old rate on the old stock. That is to say, if the old stock pays $6 a share and a 100% stock dividend is declared, the continuation of the old rate, or anything above one-half the old rate, will bring a higher return to the stockholder. It is, therefore, sufficient reason for an increased market valuation.

(3) The general market, in terms of increased earnings, may be rising. Witness the 1929 boom period, when price-earnings ratios were far in excess of conservative figures. If valuation is higher for rank and file of general list, stock to be measured for effects of stock-dividend policy would necessarily show an equivalent increased valuation.

It is contended that there is a market gain which is an "irrational" result of the declaration of a stock dividend.[13] The stockholder in turn is taxed for capital gains as a result of this increased market value. Many bankers believe that such gains result regularly from stock-dividend payments. There are other reasons that the total market value of a shareholder's interest may increase coincidentally with the declaration of a stock dividend. In general, these have been enumerated above.

In an attempt to measure the effect upon the market value of a stock after a stock dividend is declared, Shaw Livermore[14] uses two methods to eliminate the external influences. Of the thirty-eight cases which he used, it appeared that stock dividends caused a gain in price (after adjustment for other factors in the crude way employed), in twenty-three cases and caused a loss in fourteen. One stock did not show any change at all. Therefore, there is apparently no set effect of stock dividends on market price.

A comparison of the monthly price movement of the North American Company, the American Telephone and Telegraph Company, and an average of utility holding companies shows that during the rapidly changing market conditions of the past bull market there was no material variance in market returns between stock-dividend-paying and important nonstock-dividend-paying stocks. The percentage variations shown by a logarithmic chart are so minor as to warrant the conclusion that the payment of stock dividends cannot be considered a factor during major price movements.

[13] Whitaker, *op. cit.*, note 7.

[14] "Value of Stock Dividends," XX *American Economic Review* 4, December, 1930, p. 688.

Summary

While the stock-dividend policy has been a source of argument ever since the North American Company initiated such a policy, the basic reason used by opponents of the method has been the fact that a stockholder receives no additional value when he is paid a dividend. This study has attempted to present the arguments in favor of and against this method of raising additional capital. It has been shown that a stock dividend takes nothing from the property of a corporation and, therefore, cannot add anything to the ownership of the stockholder. It merely changes the distribution of a corporation's liability on its books. The extent of a stockholder's interest in the aggregate assets of a corporation has not been increased; he merely receives evidence, in the form of a stock certificate, of what he owned previously.

It has been shown that the rapid growth of the public utility business during the post-war era necessitated tremendous financing which probably could not have been accomplished solely by the issuance of bonds, preferred stock, or so-called "senior" obligations. It is consequently, in such cases, a necessity to a balanced corporate structure that a fixed amount of capital be provided by equity shareholders; at least, it evidently has been necessary for public utility companies to increase their issues of common stock from time to time. All those increases have been accomplished by means of offerings to their already existing stockholders.

The North American Company has taken the position that a regular stock dividend is equivalent to a combination of cash dividends and rights, but that the convenience, both to the stockholder and to the company, is an outstanding advantage. To the stockholder it has allowed an accumulation of dividends and the elimination of any necessity of additional capital investment. During a period of rising markets, it has resulted in a cash return (if dividends were sold) far in excess of total earnings. During declining periods, however, the amount of the cash return is highly uncertain.

Under such a policy, the company does not pay out anything in the way of cash; it simply gives stock dividends. The stockholder never gets anything out of that except his new certificate. He would receive the same benefit if such excess earnings were left in the surplus account, which would increase the value of his original holdings just as much as if he received new stock for it. Theoretically, if the number of shares has not increased, the book value of a stockholder's shares rises. The dividends paid in stock merely evidence his increased proportionate interest in the assets which have been conserved in the business.

It has been shown that the success of a continuous stock-dividend policy rests entirely upon high earning power. The maintenance of such earning power becomes increasingly difficult with the geometric increase in shares outstanding. It has been claimed that, if a company can add 15% annually to its common-stock equities, there can be no objection to a stock-dividend policy which dilutes such equities to the extent of 10% a year. This study has visibly shown, however, that the recent decline in earnings has not permitted a company, such as the North American Company, to produce so high a return as 15%. It seems quite obvious that the sustained continuation of a poor earnings trend would cause irreparable dilution of individual equities.

The stock dividend decreases the surplus account and increases the capital-stock liability; it has the effect of increasing the assets when, as in the case of the North American Company, the company has reinvested its earnings in additional utility properties. The North American Company has maintained this policy of expansion and reinvestment for a period of more than ten years. It seems logical to expect that sooner or later it will reach a limit beyond which it cannot go. The writer is not attempting to make any prophecy as to how many years such a policy might be maintained; this would necessarily be dependent upon a drop in the development of public demand for utility service. At the present time such a decline is not basically apparent. But even during the past few years of depression, the amount of money necessary for increases of property and plant has necessitated an investment equal to all of the company's earnings.

The belief that stock dividends have been responsible for increased value marketwise, or that they exaggerate price movements, is apparently fallacious. The degree of variation shown between stock-dividend-paying stocks and cash-dividend-paying stocks is so infinitesimal that it deserves very little further consideration. It may even be that the maintenance of facilities by the issuing company for creating an expanding market, so as to allow for conversion of dividends into cash, may have a stabilizing effect on price movements.

In general, a stock-dividend policy is predicated almost entirely upon such a continuation of the growth of the utility business as has been experienced in the past.

THE COTTON TEXTILE MACHINE INDUSTRY

By JONATHAN THAYER LINCOLN

The Present Condition of the Industry

IN his annual report to the stockholders of the Saco-Lowell Shops, dated December 31, 1931, David F. Edwards, President of the corporation, announced the final consolidation of the company's operations into one great plant at Biddeford, Maine. Before this date, the corporation—one of the largest in the world devoted to building preparatory and spinning machinery for the cotton textile manufacture—had operated four major plants, the Lowell and the Kitson Shops in Lowell, Massachusetts, the Pettee Shop at Newton Upper Falls, in the same state, and the Saco Shop at Biddeford; in addition to these plants, it operated two subsidiary companies in Pawtucket, Rhode Island. Mr. Edwards in his report, after explaining the manner in which the concentration of equipment and personnel into one location will greatly increase the efficiency and economy of manufacturing without lessening the production capacity of the company, presents a brief review of the extent to which plant capacity for building preparatory and spinning machinery of the kind made by the Saco-Lowell Shops has been liquidated and consolidated in recent years.

"In 1920," he says, "there were nine well-known establishments, each of which had started as an independent company, actively engaged in the production of the kinds of cotton mill machinery which this company makes. Today there are only three plants left. Liquidation and consolidations, made imperative by continued operating losses, have removed the other six. Moreover, except for the additional space acquired by this company in connection with the present consolidation program, the other consolidations have been accomplished without any appreciable increase in the floor area of the plants remaining in the field. The mortality of the cotton textile industry during the last decade has been great, but the mortality in the business of making preparatory and spinning machinery, which is wholly dependent on the cotton textile industry which it serves, has been greater still."

Mr. Edwards was, of course, interested primarily in the kinds of machinery made by his own company. We may add force to his statement by pointing out that a similar mortality is observable in the business of making weaving machinery for the cotton mills. In 1920, there were five important companies engaged in building cotton looms—today, chiefly by reason of liquidations, only two of these companies remain in active business. If we were to go back another decade, to 1910, we should find no less than twelve independent companies building cotton looms. The reduction of the number of establishments between 1910 and 1920, however, was not occasioned by a decline in the cotton textile industry—except for a single year during this period, the number of active spindles steadily increased—but is attributable rather to a technological cause, the perfecting of the automatic loom. The patents relating to this invention were controlled by two companies, and the new loom, which for a number of years had been coming gradually into favor,

at length superseded the plain loom for the production of all but the very finest grades of cotton goods.[1]

Mr. Edwards in his report makes a statement which is noteworthy in its bearing on the future of his company's business and, consequently, on the future of the textile machine industry as a whole. This statement may be summarized as follows: The cotton spindles in place in the United States reached their peak in July, 1925, when they totaled nearly 38,000,000. Today this figure has been reduced by approximately 6,000,000, or nearly 16%. This means that above 84% of the peak spindleage remains in place. Even under the present abnormal depressed conditions, the demand for cotton products during the past year was large enough to keep the spindles in place, operating at more than 80% of single-shift capacity. But it must be remembered that more than half the spindleage in place today is obsolete in design, and that much of it is worn out and in urgent need of repairs. With even a moderate improvement in general business it would appear that the industry would require permanent plant capacity of at least 25,000,000 spindles. Although this is 7,000,000 less than the number now in place and a reduction of one-third from the peak spindleage of 1925, under normal conditions, in the opinion of Mr. Edwards, the proper maintenance and replacement of this machinery capacity would provide a sustained volume of business sufficient to keep in profitable operation the three companies now remaining in the field of manufacturing preparatory and spinning machinery. Upon the basis of this reasoning, it would seem that future good business is likewise in store for the loom builders. In a word, the American textile machine industry, a compact and highly integrated industry composed of five principal corporations that have weathered the storm of liquidation, after a long period of paralyzing depression is again approaching stability.

[1] Progress in the introduction of the automatic loom may be followed in the numerous publications of the Draper Company, beginning with a circular, entitled *The Advent of the Northrop Loom*, issued April, 1895.

Historic Relation of Textile Machine Manufacture to the Textile Industry

This significant statement of present conditions in the textile machine industry suggests a phase in the history of the American cotton textile manufacture which the innumerable writers on this fertile subject have almost entirely neglected, namely the intimate relation between this important manufacturing industry and the building of machinery for it. Cotton textile manufacture was first successfully introduced into New England in 1790; by 1815, it was well established in Rhode Island, and beginnings had been made in Massachusetts and elsewhere in New England, as well as in Philadelphia and Baltimore and even farther south. In the period of gradual growth of manufactures in the United States, from 1815 to 1840, the development of the cotton textile industry was amazingly rapid in New England and also displayed a notable advance in other northern states, namely New York, New Jersey and Pennsylvania. It is noteworthy that during all this time machine building was an integral part of the textile manufacture. At first, the machinery was built entirely in factory workshops, later in highly diversified machine shops, primarily dependent on the textile industry, but also building equipment for other rapidly growing manufactures. Then,

beginning about 1850, there gradually emerged a group of shops specializing in textile machine building, which in time developed into an independent industry entirely separate from the cotton manufacture, but always completely dependent on it.[2]

The history of the growth and development of textile machine building as a separate industry, especially in the later periods, is rich in material useful to the student of industrial management, and even in the earlier history of this industry may be found the origin of many complicated present problems.

At the outset it will be well to recall the manner in which the American cotton manufacture developed with regard to locality and to consider a few figures relating to its growth. In 1840, the industry was centered in New England, chiefly on the banks of the Blackstone and Merrimack rivers and their tributaries. The dominance of New England in the industry was but little affected either by the gradual substitution of steam for water power in the manufactures, or by the rise of the railroads, during the period from 1840 to 1860. Indeed the rapid growth of the industry in New England was not reflected elsewhere in the country until about 1880, nearly a century after the building of Slater's first mill at Pawtucket.

During the 80's, however, began the gradual movement of the industry to the cotton-growing states, a development which resulted, during the first quarter of the present century, in the transfer of supremacy in this manufacture from New England to the South.[3] In 1880, the spindles of the United States numbered over 10,000,000, but only 653,000 were in the South; by 1900, over 4,000,000 spindles were in operation in the cotton-growing states; and in the peak year of 1925, the spindles of the country, then numbering nearly 38,000,000, were almost equally distributed between the North and the South. In the northern section, however, New England remained dominant, as is clearly indicated in the following table of active spindles in operation during the year 1930:

Cotton-growing states	18,585,878
New England states	11,351,290
Other noncotton-growing states	1,307,910
Total	31,245,078[4]

Now, in spite of the gradual movement of the textile manufacture to the cotton-growing states, the American textile machine industry has been from the beginning essentially a New England business. In the earlier period, when a larger relative proportion of textile factories was operated in the northern states outside New England and the number of machine shops was very much larger than in the period of specialization, which gathered force during the Civil War, textile machine building was carried on extensively in the vicinity of Philadelphia, a notable example being the Bridesburg Machine

[2] Lincoln, J. T., "Material for a History of American Textile Machinery," IV *Journal of Economic and Business History* 2, February, 1932, p. 259. This article is based on source material available in the Baker Library, Harvard Graduate School of Business Administration.

[3] Burgy, J. Herbert, *The New England Cotton Textile Industry, A Study in Industrial Geography.* Baltimore: Waverly Press, Inc., 1932. This book contains a vast array of facts concerning the localization of cotton manufacture in New England and its subsequent migration to the cotton-growing states.

[4] All the statistics in this article are from the compilations of the National Association of Cotton Manufacturers, as published in the *Year Book* for 1931. Particular attention is called to "The Statistical History of the American Cotton Industry," p. 166 *et seq.*

Works which became one of the most important companies in the field. It was established in 1820 by Alfred Jenks, who had learned his trade in association with Slater and David Wilkinson in Pawtucket and who had moved to Pennsylvania in 1810.[5] But in the main the cotton textile machine industry has been confined to New England, and no substantial progress has ever been made in textile machine building by the southern states. The five more important companies now remaining in the field are located in Massachusetts and Rhode Island.

The History of the Saco-Lowell Shops

The writer has recently made a study of the beginnings of textile-machine building in America and finds that the development of all the great shops follows, substantially, an identical pattern. For this reason a glance at the history of one of the surviving companies will give us a fairly accurate picture of the growth and development of the others. Of course, minor differences may be noted in the pattern of growth in each company. The Saco-Lowell Shops are here selected for specific attention because this corporation is the result of a merger of several independent shops, each with a separate history, and consequently exhibits most of these differences.

The genealogy of the Saco-Lowell Shops is contained in the chart which appears on page 92.

It will be noted that the three principal lines of machine building finally merged in the Saco-Lowell organization—the Lowell Machine Shop, the Pettee Machine Works and the Saco Water Power Machine Shop—all originated in cotton factories. The business of the Lowell Machine Shops had its beginning in the establishment at Waltham, in 1814, of the Boston Manufacturing Company. The origin of the Pettee Machine Works was in the shop of the Elliott Manufacturing Company, a cotton factory erected at Newton in 1819 where Otis Pettee, who had acquired mechanical skill in his father's blacksmith shop, was employed to build the machinery for the company. Here Pettee built machines for his own and other factories until 1832, when he set up an independent machine company. The great Biddeford plant in which is now concentrated all the equipment and personnel of the Saco-Lowell Shops, had its beginning in the Saco Iron Works, in 1812; thirteen years later, this plant was taken over by the Saco Manufacturing Company, newly formed for the manufacture of cotton goods. Like all the other early factories, this company erected its own building and made its own machinery. Later the York Manufacturing Company was established in the same locality. In 1839, it appearing that the abundant water power of the Saco River offered possibilities for a great expansion of the textile manufacture in that locality, a new corporation was formed—the Saco Water Power Company—for the purpose of building and equipping cotton mills. This company obtained control of the water power at Biddeford and Saco and, in 1841, erected a large machine shop and foundry on the Biddeford side of the river.[6]

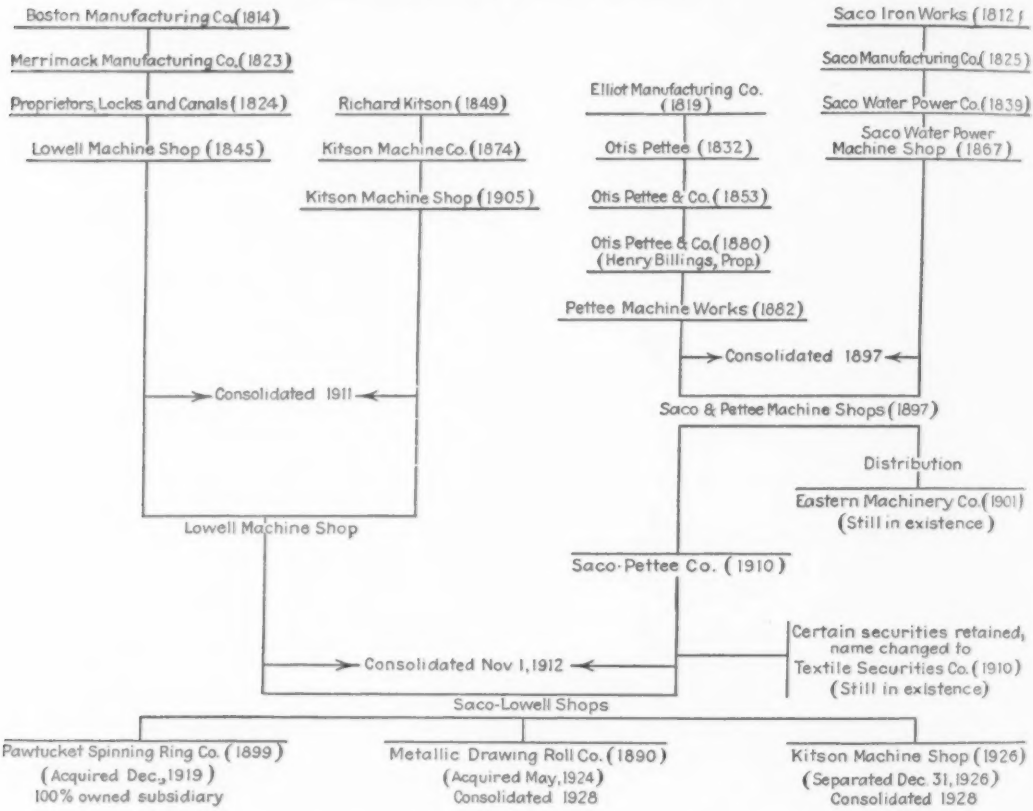
By 1880, the three independent machine companies, originating in this manner, had developed large plants in

[5] Bishop, J. L., *A History of American Manufactures.* Philadelphia: E. Young & Co., 1864. P. 534.

[6] A brief account of all these companies may be found in *A Chronicle of Textile Machinery*, privately printed for the Saco-Lowell Shops, Boston, 1924.

Lowell, Newton and Biddeford. Because the development of these companies follows similar lines, up to the time of their final consolidation in 1912, it will be necessary to consider the growth of but one of them during this period—the Lowell Machine Shop.

Chart Showing History of Saco-Lowell Shops


Boston Manufacturing Co. (1814)
Merrimack Manufacturing Co. (1823)
Proprietors, Locks and Canals (1824)
Lowell Machine Shop (1845)
Richard Kitson (1849)
Kitson Machine Co. (1874)
Kitson Machine Shop (1905)
Consolidated 1911
Lowell Machine Shop
Elliot Manufacturing Co. (1819)
Otis Pettee (1832)
Otis Pettee & Co. (1853)
Otis Pettee & Co. (1880) (Henry Billings, Prop.)
Pettee Machine Works (1882)
Saco Iron Works (1812)
Saco Manufacturing Co. (1825)
Saco Water Power Co. (1839)
Saco Water Power Machine Shop (1867)
Consolidated 1897
Saco & Pettee Machine Shops (1897)
Distribution
Eastern Machinery Co. (1901) (Still in existence)
Saco-Pettee Co. (1910)
Certain securities retained, name changed to Textile Securities Co. (1910) (Still in existence)
Consolidated Nov 1, 1912
Saco-Lowell Shops
Pawtucket Spinning Ring Co. (1899) (Acquired Dec., 1919) 100% owned subsidiary
Metallic Drawing Roll Co. (1890) (Acquired May, 1924) Consolidated 1928
Kitson Machine Shop (1926) (Separated Dec. 31, 1926) Consolidated 1928

The history of the Lowell Machine Shop really begins ten years before the first mill was built on the Merrimack, when the city of Lowell was still the village of East Chelmsford and Francis Cabot Lowell was busy with a bold scheme which he had evolved during a visit to the manufacturing districts of Great Britain. This visit resulted in the building at Waltham, in 1814, of the first mill of the Boston Manufacturing Company, where, probably for the first time anywhere in the world, all the processes of cotton manufacturing—carding, spinning and weaving—were united in a single plant. When Lowell began the construction of machinery for the Boston Manufacturing Company, he engaged the services of Paul Moody, then part owner of a small mill in Amesbury and a practical mechanic of great skill, who moved to Waltham and became superintendent of the factory. All the machinery which he designed—the power loom, dressing frame, double speeder, filling-frame, and warper—possessed elements of marked originality and differed in many respects from similar machines

built by David Wilkinson for Slater, and his associates, in Rhode Island, who followed more closely the English models.

As early as 1821, the Boston Manufacturing Company, in addition to its principal activity, that of making cotton goods, had developed a machine business of sufficient size to require a definite sales policy; in the director's records[7] for that year the policy is stated, and a scale of prices established, regulating the sale of machinery to other mills. In 1822, the treasurer was authorized to contract with Kirk Boott, as agent of the Merrimack Manufacturing Company, for all the machinery required to equip a 6,000-spindle mill. Early in the following year Boott approached the directors with a proposal to purchase outright for the Merrimack Manufacturing Company all the patent rights owned by the company and to consent to the removal of its machine business to East Chelmsford. The contract also provided that the agreement then existing between Paul Moody and the Boston Manufacturing Company should be canceled, leaving Mr. Moody free to make a similar agreement with the new owners of the machine business. A large shop was erected by the Merrimack Manufacturing Company in which was built the equipment for the first mill to be erected in the little village, soon to become the busy city of Lowell.

Then, in 1824, the shop was sold to the Proprietors of the Locks and Canals on the Merrimack River, a company which, in addition to controlling the water rights of the new manufacturing community, now engaged in the building of machinery and the construction of factory buildings. This was the first step toward the establishment of the Lowell machine business as a separate industry. The business was no longer carried on by a single mill corporation, but became one of the principal functions of an independent company. Nevertheless, this company was an integral part of the whole Lowell system of cotton manufacturing and so remained for the next twenty years. In 1845, when nearly all the great corporations that made the name Lowell famous throughout the world had been established, the machine shops were sold by the Proprietors of the Locks and Canals to a new company—The Lowell Machine Shop—organized for the specific purpose of building machinery for the general market.[8]

The plant by this time had grown to large proportions and consisted of four machine shops, a smithy, and a foundry; it employed an average of 500 men; and its annual production of machinery amounted to $230,000. The output was highly diversified, including machinery for all departments of the cotton manufacture, as well as mill gearing, shafting, water wheels, machine tools, paper mill machinery, and locomotive engines. In addition to these standard products the company carried on a general jobbing business. This characteristic of diversification was common to all the early New England machine companies. First established to meet the requirements of the cotton manufacture, these shops also supplied machinery to other manufactures that developed in the local territory; as these manufactures came to maturity, and with the broadening of markets occasioned by improvements in trans-

[7] The records of the Boston Manufacturing Company are available in the Baker Library.

[8] Lowell Machine Shop Records, 1845 to 1912, Baker Library.

portation, however, they gradually dropped the building of one kind of machinery after another, until finally there emerged the group of shops specializing in cotton machinery with which we are now concerned.

Before the beginning of the present century, therefore, the Lowell Machine Shop had come to specialize solely in textile machinery and was one of the largest and most influential organizations in this field. The company made a complete line of textile machinery, except pickers, which had been successfully made in Lowell by M. Richard Kitson, an English mechanic who settled there in 1849. In 1905, the Lowell Shop purchased the control of the Kitson Machine Shop, thus completing its line of cotton mill equipment.

In 1897, the Pettee Machine Shop at Newton Upper Falls and the Saco Water Power Machine Shop, two important companies each with an independent history running back to the early beginnings of the cotton manufacture, were consolidated, under the title of the Saco and Pettee Machine Shops; in 1912, this combination was merged with the Lowell Machine Shop. The new company, operating under the charter granted to the Lowell Machine Shop in 1845, became known as the Saco-Lowell Shops.

The growth in plant capacity of these combined shops, in the decade following the final consolidation of the companies in 1912, was notable. This was occasioned, of course, by the abnormal demand for cotton textiles which was brought about by war conditions. In this decade, over 6,000,000 spindles were added to the capacity of the American cotton mills, an increase of approximately 20%, while at the same time the export of cotton mill machinery was greatly increased. Extensive additions were made to all three of the principal plants, in Lowell, Newton and Biddeford. By 1924 the Saco-Lowell Shops, occupying sixty-two acres of floor space and giving employment to 6,800 men, had become the largest builder of textile machinery in the United States and an important competitor in foreign markets, particularly in Japan and China.

Significance of the History of Textile Machine Companies

The history of the Saco-Lowell Shops thus briefly summarized is, in its main characteristics, similar to the history of the other shops which now make up the American cotton-textile machine industry—a single exception being found in one company organized late in the last century by a firm of English machine builders. It is a compact industry, its history reaching back to the very beginnings of manufacturing on this continent, and throughout this long period it has passed through all the vicissitudes of the changing economic conditions that have influenced the life of the republic. The industry has also been changed and modified by technological improvements to as great an extent, perhaps to an even greater extent, than any other American industry. Moreover, except for the period of its early beginnings, its records have been surprisingly well preserved. For these reasons, a carefully planned history of American textile machine building is a work that should be undertaken.[9] The materials are at hand, and these materials are rich in data of great value to the student of management and business policy.

[9] Due to the well directed efforts of the Business Historical Society, the following materials, useful to this purpose, are available in the Baker Library: the Fall River Iron Works Collection, records beginning with the year 1821; the Kilburn-Lincoln Papers, a collection of correspondence, 1846 to 1869; the Lowell

Many recurrent problems in business may be better understood in the light of historical analysis thus made possible. Take, for instance, the perennial discussion as to the relative advantages of large-scale and small-scale business. Of course the definition of what constitutes a large and a small business has varied with the progress of our industrial establishments; but the different scale upon which textile machine building was carried on in the relatively small, owner-managed shops in the Rhode Island district, and under the corporate form of organization in the larger shops north of Boston, furnishes the basis for an historical examination of the problem. As has already been stated in this article, the records of these shops, particularly those established north of Boston, are also rich in material relating to integration, to mergers of capital, and to consolidation of plant operations. Here then are two classes of problems, in the study of which effective recourse may be made to the history of textile machine building—and there are many others. The cycle from specialization in products through diversification and back again to specialization, which characterized most of the companies, affords abundant material for a long-time study of these fundamental topics as related to labor, process and equipment, plant, and management. There is also material for similar studies in simplification and standardization in product, process and equipment. And the study of all these problems, as they have occurred in the textile machine industry, is enriched by the variety of raw material consumed in manufacturing and also by the fact that the industry requires the employment of skilled workers in many trades —machinists and molders, carpenters and blacksmiths—and all classes of labor from research engineers to unskilled helpers.

In addition to production problems, the history of the textile machine industry affords valuable material for the study of problems in marketing. A notable example in this field is found in the manner in which American builders met overwhelming foreign competition in the sale of carding machinery. Until the year 1890, English preparatory machinery—particularly the revolving flat card—was immeasurably superior to the American equipment, and its importation at extremely high prices was a source of great profit to the English builders and their American agents. In 1886 the Pettee Machine Works commenced building cards, modeled on the English design, making improvements in construction and developing plans for the demonstration of these improvements. This effort was so successful that the company, which up to that time had made a variety of machines, decided to specialize in building cards, drawing-frames, and railway-heads, and erected a large plant specifically designed for this purpose. The Pettee Machine Works in time outdistanced their foreign competitors, only to meet a new competition from another American company which had also commenced building revolving flat cards. This company manufactured a full line of cotton mill machinery and had an advantage in its ability to quote prices on a complete mill equipment, including spinning and weaving machinery, as well as on cards. This

Machine Shop Collection, including ledgers, cash books, shop orders and letter books, 1845 to 1912; and the early records of the Davis and Furber Machine Company. In addition, the records of the Whitin Machine Works, from 1831 to date, have been carefully preserved in the office of the company.

situation led the Pettee Machine Works first into an informal association with two other machine companies, one specializing in spinning machinery and the other in looms, and, in time, to the consolidations already noted in the present organization of the Saco-Lowell Shops.[10]

Again, the development of the automatic loom gave rise to a long series of interesting marketing problems. The patents relating to this revolutionary invention were controlled, as we have seen, by two American companies. Despite the obvious advantages of the new improvement in the art of weaving, the introduction of the automatic loom was slow; the builders of plain looms, aided by the opposition of labor unions to the innovation, as well as by the conservatism of the manufacturers, maintained their market for many years. The sales policies adopted by the builders of automatic looms to overcome these obstacles, and the final success of these policies, call for an analysis beyond the scope of this article; the value of such a study is obvious, however.

In addition to the above problems, simple variations of problems common to many industries, the history of textile machine building presents many interesting situations peculiar to itself and occasioned by the complete dependence of its business upon cotton textile manufacture. A glance at the history of the cotton manufacture will reveal the fact that while cotton factories, machine shops, and commission houses have been organized into separate industries, nevertheless the building of textile machinery, the manufacture of cotton goods, and the finishing and distribution of these goods constitute the essential parts of one system. In the history of that system, considered as a whole, it will be observed that, when machine building was established as a separate industry, it came to employ a large capital and finally outgrew the normal demands of the cotton manufacture for its product. Then the machine builders naturally sought to create a larger market by fostering the building of factories, and the new mill corporations thus formed frequently looked to the commission houses for aid in securing working capital. This situation occasioned many interesting problems in finance and distribution.

One of these problems is indicated in the organization chart of the Saco-Lowell Shops. Here the Eastern Machinery Company, organized in 1901 and still in existence, appears as an integral part of the scheme of operations, but the Eastern Machinery Company never manufactured machinery. It was organized as a holding company to purchase securities in textile mills underwritten by the Saco-Pettee company. The taking of stock in new mills was a practice common to most machine builders during the great period of expansion in the cotton industry, which began with its extension to the cotton-growing states. The methods of handling the securities thus subscribed for were various, the organization of the Eastern Machinery Company being but a single example. Textile machine builders have sometimes been blamed for a policy that grew quite naturally out of the close relationship between their industry and the manufacture they serve. It may be that they deserve praise for successfully performing a necessary function in the growth of the American cotton textile industry! Certainly a careful analysis of this interesting question would serve a useful end.

[10] Information communicated to the writer by an official of the company.

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MARKETING PROBLEMS OF BITUMINOUS COAL

By BLAINE A. DAVIS

A BUSINESS man frequently attributes the failure of his company to make money to the tactics of his competitors or to factors beyond his control. Yet the policies pursued by his company may themselves be contributing to the depressed state of affairs. Such is the prevailing attitude and condition of the bituminous coal industry.

Few are the companies which are making profits in the bituminous coal industry today. Only a few years ago, however, it was one of the most lucrative of all industries. In 1918, bituminous coal provided 72.3% of all available power, but by 1929, it was providing only 56.8%. During the same period, the share of power made available by oil and gas increased from 14.9% to 34.7%. What is even more startling is the fact that, during this period of widely expanding industrial activity, when total fuel consumption increased 30%, the actual consumption of bituminous coal remained stationary; the advance of industry is being shared by competing fuels alone.

As is seen in Exhibit 1, the fault does not lie in the cost of the product. American business men, sharp to cut costs in all possible ways, are apparently willing to buy oil or gas in preference to coal, regardless of the wide differences in cost. If the price is right, the fault must lie in the method of selling or in the product itself.

The Problem of Merchandising

Coal once was sought after by consumers. Then, anything that could possibly be called coal could be sold.

EXHIBIT I
COMPARATIVE COSTS, AT NEW YORK

Coal:—25,000,000 B.T.U. = 1 Ton = $4.62
(12,500 B.T.U. 1 lb.)
(Price: Coal $1.62
Freight 3.00*
Total $4.62)

Oil:—25,000,000 B.T.U. = 200 Gal. = $9.50
(18,000 B.T.U. = 1 lb.)
(Price: $.0475 per Gal.)†

Artificial Gas:—25,000,000 B.T.U. = 45,545 cu. ft. = $27.37
(550 B.T.U. = 1 cu. ft.)
(Price: $.60 per M cu. ft.)

Natural Gas:—25,000,000 B.T.U. = 27,777 cu. ft. = $15.27
(900 B.T.U. = 1 cu. ft.)
(Price: $.55 per M cu. ft.)‡

* Coal Price is *Coal Age* composite price, Sept., 1931. Freight is net ton tariff, Clearfield to New York. These cost figures do not include cost of disposal of ashes, cinders, *etc.*
† Price based on oil at '2 per bl. at New York.
‡ Average prices prevailing.

But competition has changed all this. Today, the consumer demands the value paid for. He demands that the product be fitted to his needs. Such fitting of the product to the consumer is merchandising.

Bituminous coal is a natural resource, whose inherent characteristics determine to a large extent the market in which it can be sold. While manufactured goods can be changed and adapted to suit the demand, coal must be accepted as nature left it, with few man-made changes. If coal characteristics were uniform throughout, if every lump of coal were like every other lump of coal, the problem would be simple. But coal, even in a single vein on a single property, varies so widely in characteristics that the product of one "room" must be sold on an entirely different basis than the product of another. Both coal producers and consumers waste vast sums of money and duplicate an enormous amount of work each year in attempting to direct coals into their proper channels.

Due to the limited knowledge of coals on the part of the operator or the consumer, and to the fact that few consumers can test all the coals available, the consumer may never procure the coal best suited to his requirements. But such testing of coals is open only to the large users with vast financial resources. Admittedly, a most excellent job of fitting the product to the uses of these large consumers has been accomplished. But, in order to endure, the industry must have a broader basis of understanding. All users, not the select few, must have the most economical product for their needs available to them. It must be made intelligible to all users just which coal is most economical for their requirements, and it must be made easy to order the product desired. The adoption of an adequate system of classification is the logical foundation of this necessary broad basis of understanding leading to economy in use.

Classification of Coal

Today, the only classification of coal is based upon the use to which the coal is put and the field from which it was mined. But such a method of classification fails to accomplish that which is needed the most—the direction of coal into the channels of the greatest economy in use. To meet this need, a system of classification must be based primarily on the inherent characteristics of the coal. Likewise, such a system would be relatively permanent, for while usage changes with the needs and technique of consumers and while

fields are mined out, inherent characteristics are ever static.

The question of what basis for classification should be adopted is, at the present time, highly controversial. There are numerous exponents of chemical characteristics as the proper base, while others favor heat values, but all agree that physical condition must be considered. Admittedly, it would be more satisfactory if some one characteristic, such as B.T.U. rating, might be used throughout as the base. But B.T.U. rating is only one variable in the characteristics of coal. If the rating system is to satisfy the requirements placed upon it, all the major variables must be taken into account.

Already, much time and effort has been expended in the search for a suitable classification.[1] The efforts of many of the leaders of the industry have been enlisted, but as yet no satisfactory plan has been proposed. Yet, for the achievement of economical use through a universally understandable grading system, it seems to be the basic need of the industry that some satisfactory classification be found.

The corollary of classification is the simplification and standardization of the line of sizes in which coal is offered to the consumer. Uniformity should exist throughout the industry. Today, it is common practice for a mine to be producing coal in as many as twenty different sizes. It must be said that the trend toward a multiplicity of sizes is commendable from the standpoint of efficiency in consumption, for it fits the product to the needs of the consumer; but it is carrying the grading according to sizes forward to a degree which leads to the confusion of the consumer—possibly causing losses greater than is the efficiency in use attained through the multiplicity of sizes. The chaos which involved so many industries before the simplification program of Mr. Hoover, as Secretary of Commerce, became a reality, looms for the bituminous coal industry unless the necessary steps are taken to hold the number of sizes at a nominal figure.

[1] See the *Proceedings* of the International Conferences on Bituminous Coal at Pittsburgh, 1926, 1928, and 1931.

Quality Production

If the developed classifications are to be of value, if these classifications are to have significance in the eyes of the consumers, there is need for productive processes which permit the preparation of the product to meet the specifications of these classes and which, at the same time, permit the standardization of subsequent production. The maintenance of uniform quality is of fundamental importance; but even with the most efficient management, mechanical means are essential.

However, uniformity alone does not suffice. Operators must give the greatest possible value of product if they are to compete successfully with gas and oil. Every pound of ash removed at the mine by the operator by any process will meet with the commendation of the consumer, who must pay the freight charges on the noncombustibles as well as on the combustibles. In 1926, the railroads carried about seven and one-half million cars of bituminous coal, with an average load of better than fifty tons. Since the average coal runs about 10% ash, each car carried about five tons of ash. If the cleaning and processing of the coal could reduce the ash content 25%, or to 7.5%, which is not inconceivable, the savings in freight charges alone to the consumers, assuming $2.50 per ton to be the average freight charge, would

amount to $23,500,000. Coal dust should also be eliminated. It is not only objectionably dirty, but also a waste of energy paid for by the consumer. The chemical treatment of coal by calcium chloride is a constructive step in coal-dust elimination, and may be accomplished at an estimated cost of six cents per ton. Coal, if it is to sell as a quality product, if it is to yield the optimum of economy in use, must be cleaner and more carefully prepared than it is at present.

Consolidation and Concentration

Although the amount of coal mechanically screened and loaded is small in comparison with the total, it is rapidly increasing, its present indicated growth being about 24% per year. But such mechanization of mines for cleaning and loading coal necessitates the installation of a large amount of expensive equipment, demanding large financial resources and backing. The financial demands of mechanization will probably foster a widespread merger movement of the many small companies into a relatively small number of large producers.

In the bituminous-coal industry today there is no one company, or group of companies, in a position to lead the industry, as the U. S. Steel Corporation leads the steel industry and as the American Telephone & Telegraph Company leads the public utilities. Yet the value of these giants to their industry as pacemakers, as standard-developers, as concerns which keep the rest of the industry in line, is undeniable. Today, the largest of the coal companies controls less than 4% of the output, while over 200 of the largest companies control only 50% of the output. Ruthless competition is not conducive to securing the best and most economical product for the consumer's needs. The costs of complete mechanization, leading to widespread consolidation, make possible wide gains to the industry and to the consumers, if the constituent parts of the consolidations are sound and properly welded together. There will be resulting opportunities for wise decisions and there will be a broad basis on which to build a rationally conducted industry. But the gains of the consolidation are contingent on the character of the men placed in control and on the wisdom of their decisions. The consolidations can be adjudged good or bad according to the manner in which the executives respond to the demands put upon them. One thing is certain: consolidations will make courageous action possible, while under the present system it is virtually impossible.

In addition to its demand for financial backing due to the large initial cost, complete mechanization has an additional ramification which promises far-reaching results. Large capital expenditures mean heavy overhead charges. If these overhead charges per ton of output are to be kept within reason, they must be spread over a large tonnage, thus fostering a movement toward the concentration of output in between 1,000 and 2,000 mine heads, diversified geographically and by classes of product.

There is ample evidence that such a movement is already in progress. Mines producing in excess of 200,000 tons annually represented 65.2% of all production in 1929, as compared to 42.1% in 1920. The 1930 annual report of the Pittsburgh Coal Company stated that "at the end of 1930, about one-half as many mines were operated as in 1923, although tonnage output was off only 4%." Without concen-

tration resulting in vastly increased output per mine, as well as steady use of facilities, the costs of mechanization would necessarily have to be passed on to the consumer. Any such attempt would only make possible further inroads of competing fuels, however, for cost to the industrial market which consumes about 80% of the coal is an important consideration. But the concentration of output makes possible the maintenance of costs of production at present levels, and even holds possibilities of a reduction of these costs.

In 1923, the investigations of the Coal Commission revealed the striking advantages of continuous operation. It was found that to operate only three days a week, instead of six, increased the costs of production 25%. That is, if a mine were producing twenty thousand tons of coal in three days' operation a week at a cost of $2 per ton, working a full week of six days would yield forty thousand tons of output at a cost of $1.60 per ton. If these figures were brought up to date, the cost aspect of continuous operation would be even more startling, due to the ever-increasing burden of overhead.

Concentration of operations would also reduce the complexity of rail movements. A representative of the Chesapeake and Ohio Railroad testified (1926) before the Interstate Commerce Commission that, at that time, coal was being moved from a relatively few continuously operated mines, rather than from all the mines along the road, and the carrier was handling upward of four and one-half million tons of coal per month. Whereas, if it had been necessary for the road to distribute cars among all the mines, the maximum handling capacity of the carrier would not have exceeded three and one-half million tons per month. Concentration of operations had resulted in an increase in carrier capacity of better than 25%! Such results would enable the roads to reduce their freight rates on coal and still leave themselves a greater aggregate profit than before. When it is considered that freight charges constitute between 35% to 65% of the cost of coal to the consumer, the importance of any reduction in freight rates on the price of coal to the consumer is obvious.

The effect of lowered costs of production on the marginal producers would be definitely advantageous to the industry as a whole. If, through extensive mechanization and concentration, the costs of production could be so reduced that operations could be profitably carried on at current or even lower price levels, most of the marginal and "snow-bird" producers, whose product is not of quality standards and whose activities reflect unfavorably on the whole industry, would be permanently forced out of the market.

If the prevailing trend away from the use of bituminous coal is to be altered, however, the industry must take further steps. It is not sufficient to establish a broad basis of understanding, making possible rational purchasing of coal by all users, or to push quality standards to the optimum and yet hold the price of coal at present or even lower levels. Steps must be taken to augment the demand for coal.

Research

A possible, but most difficult method of increasing the demand for bituminous coal is the discovery of new uses for the product. Research has greatly

increased efficiency in use of coal, thus robbing it of much of its market. Improvements in machinery and in the combustion of coal between 1919 and 1929 have cost the industry a potential market estimated at a hundred million tons annually. Yet, is it not also true that without these improvements, competing fuels would have made even greater headway in stealing the market? However, it is said that the present efficiency in use achieved by public utilities has involved such large capital expenditure that, with coal at present prices, this increased efficiency in coal consumption is unprofitable to the coal companies. Interest charges on the improvements are greater than the possible savings on the alternative use of coal at the present price. Indications are that research will not cut into the market for coal with such telling effect in the next decade as it has done in the past.

But just as effectively as research has been employed to contract the market for coal, so can it be employed to expand that market. The problem is to make coal a more valuable commodity. Coal is the starting point, the base, of many valuable products, ranging from fertilizer to medicine, from dye to dynamite. The aim must be to make coal such a valuable commodity that to burn it raw would be regarded as economic waste. Coke may well be the key to a vast increase in the demand for bituminous coal, the weapon with which successfully to combat the competing fuels. Coke corrects most of the disadvantages of coal and has a number of advantages in its own right. But the production of by-products cannot go forward until science can cheapen the by-product processes and until business can develop an extensive and profitable market to absorb these by-products. Should such processes and markets become a reality, it would be possible so to reduce the price of coke, due to joint costs, that the price of coke per B.T.U. would completely shut out all competition. It has been estimated that, should raw coal be replaced by coke alone in the present market, it would mean an increase of 40% in the coal requirements of the country, due to "reduction" in the by-product process. The by-product oven might well be the solution of the problem of the dwindling market for bituminous coal.

But the industry cannot afford to sit idly by while scientists slowly seek out the needed processes and business gradually develops the needed markets. In self-preservation, the industry must take the aggressive part in promoting the use of raw coal, aiming to intensify the use of coal in existing markets. This objective calls for a sound marketing program, based on rational policies of selling, servicing, advertising and pricing.

Direct Selling

There are two methods of selling most common in the bituminous-coal industry today, the selling agent or coal broker, and direct selling by company salesmen.

The use of selling agents is an outgrowth of the large number of small operators whose volume of business did not justify the use of their own salesforce. Although the success of the selling house depends on the service it renders, these selling agents could scarcely be expected to use very aggressive selling methods. It is ever more to their taste to reduce prices to secure business than to increase selling effort; for sales effort is at the expense of the

selling agent, while price reductions are at the expense of the operator. Moreover, the operator has little control of the selling agent, has no hand in the development of the policies for the selling of his product, and has no contact with the actual consumer. If coal is to be made to fit the consumer's needs, the coal operators must have intimate knowledge of problems confronting the users of coal. Complaints can reach the producer only by a circuitous path, incurring a delay in adjustment that might well lose the customer permanently to the industry. If bituminous coal is to regain its former heights as a source of energy, close coordination of production and sales is necessary. Direct selling is the logical solution. The consolidation of companies into a relatively small number of producers will provide the necessary sales volume to permit the abandonment of the selling agent.

However, the use of direct selling gives rise to problems regarding the selection and training of salesmen, their control, and their method of compensation. Direct selling is no panacea; unless the problems of direct selling are adequately solved, the results may be inferior to those now obtained through the use of selling agents.

The selection and training of the salesmen is of primary importance. Since the aim throughout the plans laid for the classification of coal and the simplification of sizes was to make possible rational purchasing, the salesmen must be qualified to deal in coal as a quality product. It depends entirely on the type of salesmen used whether the buyer's attention is focused on the merits of the product or on the price. A large part of coal is used by public utility and industrial companies, where the deciding voice in purchasing lies in the operating officials and plant engineers. The salesman, to reach these men successfully, must talk their language, be quick to size up the combustion problem, and be able to offer constructive criticism about it. Too many coal salesmen are unable to meet the test of adequate engineering knowledge of the product which they are trying to sell, lacking the information and experience necessary to lift coal out of price considerations alone. The sales manager in particular must be schooled in knowledge of combustion problems, so that he may in turn train and assist the salesmen. If coal is to be regarded as a quality product, selling to industrial users must be attacked from the engineering angle.

The coal operator must not fail to differentiate between the industrial and the domestic markets in developing his sales strategy. The use of the same salesforce to reach both markets, although less expensive, will probably result in one market's being intensely exploited while the other is relatively untouched. An adequate knowledge of the product in use is essential if coal is to be sold on a quality basis in the wholesale market, but the training can be entirely practical. The buying motives in the wholesale market are as fully rational as in the industrial market, but the industrial user is interested in coal as a source of power while the wholesaler is interested in the satisfaction in use that it gives the domestic consumer.

If coal is to be sold on the quality basis of economy in use, rather than on a price basis, the policy of paying the salesforce must be in accord. The salesman's mind must be focused on the satisfaction of the users; hence, the method of payment must be a

reward for achieving that satisfaction.

Admittedly, the problems of direct selling are many and knotty, but the use of direct selling as an instrument of aggressive exploitation of markets will fully reward the industry for the rational solution of those problems.

Service

Service, likewise, must be extended to the users of coal if coal is to sell as a quality product. The salesforce can adequately cope with most combustion problems, but a technical sales service must be provided to deal with the extraordinary problems. Such service is an expensive addition if it is of high quality; unless service is that, it is a liability rather than an asset. The aim in providing such service is to determine the class and size of product best suited to the needs of the individual customer. Before coal had to meet the competition of oil and gas, a plan to educate users to burn the most economical product in the most economical way was unknown. In fact, so long as users were bound to the use of coal, it might appear to the superficial observer not to be good business to teach economy, for economical use might mean reduced consumption. Competition has changed all that, however; today, only satisfied customers remain users of coal. And the only way to keep them satisfied is to get them to burn the coal most economical for their requirements and to burn it properly. Herein lies the value of technical advice.

In reality, there is no such thing as an all-purpose coal. Combustion engineering is as vital a necessity to the coal producer today as is the mining engineer. The attitude of *caveat emptor* has no place in the marketing plans for a quality product. Selling must be done under a definite policy which recognizes that coal is more than a commodity, and that the ultimate consumer, either industrialist or householder, is entitled to the maximum of satisfaction from the coal which he purchases. The technical advice of a fully qualified combustion engineer is a fundamental step in the aggressive attack to regain for coal its former position.

Advertising

The purpose of advertising coal is to acquaint users or potential users with the characteristics and performance of the product and with the advantages of coal over competing products. The attitude of the consumers cannot be taken for granted; the industry must be aggressive, not passive. Coal advertising should aim to sell these actual or potential users on the applicability of coal to their requirements, and to make them receptive to the selling arguments of the salesmen.

The advertising of coal to the industrial market must be addressed to the operating executives and plant engineers. It should stress the fact that coal is a dependable and economical means of generating power, easily regulated and controlled. Coal is not only inexpensive at present, but the practically unlimited supply reduces the risk of shortages and of a generally higher price level in the future. In use, coal is nonexplosive and will not leak or escape, although some coal does disintegrate, or "slack," on exposure. Stressing these selling points, the appeal should be entirely rational, and the text written in the language of technical men.

The advertising of coal to the domestic market must be addressed to the average American householder.

The same rational appeal which is addressed to the industrial market must be stressed, but the greatest emphasis must be placed on the emotional appeals of the convenience and comfort of modern coal heating. The text must be strictly nontechnical.

The power of the printed word should not be underestimated in the selling of coal. Although advertising alone cannot retain for coal its position as a leading fuel, it will certainly prove a force in the "battle of fuels."

Price Structure

The price structure of the bituminous-coal industry stands in vital need of revision. The outstanding feature of the present price scale is the infinite number of prices quoted, prices which are completely without foundation on any ground. Only twenty *per cent* of the total production of bituminous coal goes to domestic users, yet this twenty *per cent* yields forty *per cent* of the gross income of the industry. This twenty *per cent* is forced to carry the entire profit burden of the industry, and, in frequent cases, the profits on domestic sales are used to offset losses incurred in selling to industrial users at less than the costs of production. Is it any wonder that the domestic consumer is turning away from coal? In addition, the setting of prices of coal to the industrial or public utility market is a matter of bargaining between the operator and the user. Varying prices as a penalty for poor bargaining is futile, nor is long-continued use of such a policy by the industry a more adequate justification. With oil and gas making strong headway, maintaining the good faith of all the present consumers is necessary if they are to be retained, and their good faith must spread to others if new users are to be gained.

Moreover, under the present system of setting prices by bargaining, the entire sales attack of salesmen has to be built around price. Yet coal is a product whose economy in use varies not only with differences in the natural characteristics of the coal, but also with the amount of care and effort expended in its preparation. Salesmen must sell the product, not the price, if the industry is to combat the competition of oil and gas successfully. The logical method of moving the emphasis from the price to the product is to establish a one-price policy.

The establishment of an open exchange for dealing in coal would do much toward rationalizing the price situation and encouraging strict adherence to a one-price policy. With the development and adoption of an adequate system of grading coal, the open exchange would be a distinct possibility. Detailed cost analysis will show definitely the production costs by sizes and characteristics, which should be the basis of proper differential adjustment of prices. The open exchange thus can definitely establish and publish daily prices of coal by classes and sizes, definitely assuring equitable prices to all.

Conclusion

The bituminous coal industry cannot longer continue the policy of fitting the product only to the larger customers. If the industry is successfully to meet the competition of oil and gas, it must make understandable to all users of coal just what type of product is most economical to each user; also, it must make that type of product available, giving the best possible quality but keeping prices at present levels. The

industry must support research which promises to open wide areas of increased demand in the future; and it must immediately enter upon a well-formulated, aggressive marketing program, meeting the intensive sales efforts of oil and gas with equally intensive efforts. Bituminous coal is still the giant of the fuels, but its stature in the future will depend on the resourcefulness with which the thrusts of oil and gas are met today.

OPERATING ASPECTS OF THE RETAIL SALES TAX

By A. C. WILLEMSEN

CAN a retail merchant act as a collection agent for a retail sales tax and yet avoid paying all or part of that tax himself?

The gathering force of sales tax legislation and the narrow margin of profit of the mass of retailers today point to the almost vital necessity of an answer to this question. With such an answer legislation may be guided, for it is not the purpose of the Government to destroy business. And from the answer the retailer may learn the magnitude of the problem facing him under a retail sales tax.

The problem is essentially one of business administration, and an attempt will be made here to point out some of the probable consequences of a retail sales tax from the point of view of retail operations. A background upon which the tax is built will be briefly outlined, in order that the operating analysis may not go astray.

Theory and Form of Tax

It is generally assumed that the intention of the retail sales tax is to tax the consumer according to the amount of his retail purchases. Furthermore, the tax income must considerably exceed the costs, admittedly heavy, of administering the tax. Yet to obtain a gross revenue from retailers of one billion dollars would entail a tax of at least 2% in a year as prosperous as 1929.[1]

A 2% reduction of retail profits is plainly unthinkable. It would result in deficits for most institutions in even the best years. The Harvard Bureau of Business Research, for instance, gives the highest average net profit figure for department stores for the past several years as 2.2% of sales (in 1927). In 1930 and 1931, obviously, a retail tax would have been unbearable.

Likewise, the retail tax is not intended to tax production. To tax production through the medium of retail taxes would result in gross inequality of payment, nor would it be possible adequately to administer such a tax.

Retail tax legislation, it may be concluded, while levied on the retailer, is intended to be shifted to the consumer. The conclusion that the consumer will pay the tax, however, is open to question. Many factors, as the following analysis of operations will bring out, act to prevent universal shifting of the tax. Lutz[2] says:

> It must be concluded that the incidence of the sales tax is by no means so simple as its advocates frequently assume, and that its effects, in the event that universal shifting is not accomplished, would be likely to be seriously inequitable among different types of business concerns.

The chief impetus to the sales tax came as a result of the financial exigencies of the World War and the following years. Many countries, and some of our states, have used the tax, but retail sales taxes have nearly

[1] Based on *Retail Census of Distribution*, 1929.

[2] Lutz, H. L., *Public Finance*. New York: D. Appleton and Co., 1929. P. 339. See also Buehler, Alfred G., "The General Sales Tax in the Fiscal System," IX HARVARD BUSINESS REVIEW 3, April, 1931, p. 348.

always been a part of general sales tax programs. Sales taxation during the past 15 years has shown three points of major interest to the retailer: the use of sales taxes has become quite widespread, again pointing to the imminence of legislation in this country; the rates of tax have been constantly fluctuating, thus presenting the business man with a perpetually shifting problem; and the taxes are tending to approach a rate low enough to make direct billing impractical, bearing out the experience with the war "nuisance" taxes which caused great consumer irritation.

Almost as many variations have been used as there are taxes. The actual form of the tax will determine to a large extent the retailer's mode of procedure in attempting to shift the tax to the consumer. The chief element here is the rate at which sales are to be taxed. This rate is influenced by the need for revenue in excess of costs of administration, the practical necessity of exempting small sales volumes, and the political impracticality of recreating the "nuisance" taxes. It is not unreasonable, for this analysis, to assume a rate of 1% or 2%. This is well in line with the experiences of other countries. A higher rate is unlikely in the near future, and a lower rate would hardly justify the machinery of administration; a lower rate would probably be a harbinger of a higher rate.

The Retailer's Problems

Should a retail sales tax become an actuality in this country, it is evident that the retail merchant would have a difficult practical problem to face. Legislation provides merely for collection of the tax from the retailer, not for ultimate collection from the consumer. That is the merchant's problem. His only alternatives are absorption of the tax and reduction of his own net profits, or shifting the tax to the manufacturer. Neither of these methods is intended by the tax. Nevertheless, the difficulty of shifting the tax to the consumer may well cause the retailer to use either or both alternatives.

The problem of shifting the tax is essentially one of pricing. It is only in the price of an article that the merchant can collect the tax. Thus, the factors to be considered are all those which originally influenced the prices of all articles, plus those factors introduced by the tax itself. Under existing conditions, can the retailer handle this pricing problem successfully?

The New Mark-up.—Upon the institution of a tax the retailer plans his pricing strategy. He first wants to obtain a mathematical background. Therefore, he sets out to figure his new initial mark-up, using the usual formula:

$$\frac{A + B}{100\% + B} = \text{initial mark-up,}$$

where A equals the desired gross margin, including for instance:

Expenses....	32.0%		
Profits.....	4.0%	Total.....	36.0%

and B equals the reductions from sales, such as:

Mark-downs..	7.0%		
Shortages.....	2.0%		
Discounts....	1.0%	Total.....	10.0%

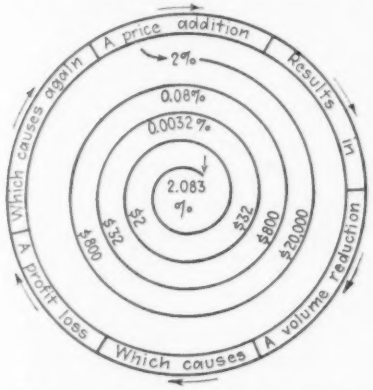
The initial mark-up will be, applying the formula:

$$\frac{36.0\% + 10.0\%}{100.0\% + 10.0\%} = 41.8\%$$ initial mark-up. First, however, the retailer adds 2.0% (assuming that to be the amount of the tax) to A, getting:

$$\frac{38.0\% + 10.0\%}{100.0\% + 10.0\%} = 43.6\%$$ initial mark-up, or an initial mark-up of 1.8% greater to cover the tax.

The error of this method becomes apparent when it is considered that the retail tax is not an ameliorating influence on the problems of markdowns, discounts, or other reductions. These factors, it will be seen, probably would be even more serious under a retail tax than they are at present.

The effect of the tax might better be considered as affecting the net-profit figure directly. Economists tell us—and it seems reasonable—that the physical volume of consumption will be lowered when prices are raised. So the first snag appears in the shifting program. The retailer formerly enjoying a volume of $1,000,000 can expect to hold that dollar volume. Since he must pay 2% tax on it, however, his retail value of goods sold becomes $980,000 ($1,000,000 minus 2% or $20,000). If he has been earning a net profit of 4% ($40,000) on his sales the new net profit figure will become only $39,200 (4% of $980,000), a loss of $800 in net profit although all prices were raised 2%. It has been seen that the tax does not intend to affect the net profit of $40,000, for it is a tax on consumption and not, supposedly, on retail operations. If the $1,000,000 sales cannot be exceeded, a higher initial mark-up is necessary. This vicious circle continues until a 2% tax results in a greater mark-up of 2.08⅓%, a reaction which might be represented as shown in column one.



Some retailers will undoubtedly be prone to believe that their volumes will not be cut. This result is possible only in so far as people can be induced to spend their savings, or in so far as some other retailer bears a more than proportional loss of volume.

The new mark-up, however, although already above the tax percentage, is calculated under static and ideal conditions, in which every sale is totally completed at the time of original sale, and assumes the perfect willingness of consumers to pay the additional amount on any item purchased. Obviously a retailer could not add 2.1% to all his old price tags and let it go at that. He must apply the mark-up in the face of numerous opposing forces. He, therefore, attempts to determine just where he can apply an additional mark-up and just where he will find it impossible to do so. In his attempts to find the path of least resistance, what forces must the retailer consider?

Competition.—The merchandising situation in the United States presents a vista of keen competition, especially in the retail field. Every commodity is to some extent in competition with every other one. Competition is the "life of trade." Although this prosaic statement has been an economic watchword, the force of competition may prove disastrous in a measure rather than healthful, when considered in its effects on retail operations under a sales tax.

Competition means that Retailer A, for example, has not nearly so much control over his prices as he would like to have. His neighbor, Retailer B, decides that he may find it very lucrative not to raise his prices on a certain article. With other merchants

attempting to collect the tax through selling prices, B can hope for a considerable volume of trade with his original prices, expecting to absorb the tax in the increased profits resulting from larger volume. But A may feel the same way about it, perhaps on a different item. Carried to its extreme, competition will force an almost immediate return to pre-tax price levels. And it is not unlikely that, without artificial control, such a situation will exist.

Thus, the retailer is faced with the revision of his mark-up plans. He must search for those goods which competition allows him to mark up, apply an extra large mark-up percentage to them, and avoid raising prices on his keenly competitive items. If he is fortunate in his goods, he may not find undue difficulty in this process; if he exists in a highly competitive situation, however, the problem may defy solution.

Such a revision of plans, such a search for the practical way out, continues as numerous other factors are analyzed and the extent of their application to a particular situation evaluated.

Brands.—The popularity of brands, both private and national, in many cases further intensifies the competitive situation. Difficulty will be encountered in selling at prices varying from the customary prices of such goods, prices which are often cut prices set by keen competition. Private brands probably are not a solution, for they must meet national competition. Attempts may be made to force lower margins on the manufacturer.

Utility.—With their purchasing power reduced by higher prices, the tendency and perhaps necessity of consumers will be toward purchase of utility goods. The margin of income for purchase of semiluxury and luxury goods will be reduced, especially in view of the probable necessity of shifting most of the taxes to these goods.

The market for necessities will probably suffer but slight, if any, curtailment because of the tax. People will go without jewelry but not without food, clothing and shelter. But that does not mean that the merchant of necessities can go ahead and add on the tax, for in these lines perhaps more than in any other competition is keen.

On the other hand, the retailer of luxury products will find curtailment of volume an important factor. He may also find that it is more desirable to pay part of the tax himself than to suffer a loss in volume. In either case he suffers a loss in net profits.

Unit Values.—When the ordinary consumer is buying a necessary article he watches prices closely, shopping where prices are lowest and picking out articles priced low in respect to value received. Shoppers, through education and advertising, are becoming more and more able to do this, and when a person's buying power is curtailed, it is doubtful if any amount of "selling" will increase purchases. Small opportunity is left to the retailer to raise his prices, even with consumers fully cognizant of the tax.

A practical operating difficulty is encountered in the impossibility and expense of adding 1% or 2% to articles of extremely low sales price. Any such taxes must be shifted to other goods. A 1% tax would be inapplicable to items selling at less than $1 retail because of the impossibility of adding mills to the prices. Yet to raise the 10-cent article to 11 cents, for example, often would result in making the article unsalable.

On the other hand, a high-value article, already eliciting a large sum

from the purchaser, could quite readily be sold at a small price differential. But the retailer selling goods priced over a fairly wide range will have to make his mark-up on high-value and nonutility articles cover all his additional costs plus the tax. Thus, in order to enable the retailer to "break even," prices are kept low on small-value goods and raised excessively on high-unit values.

Style.—Style goods present a major marketing problem. The style perishability of a wide range of products has led to large and numerous mark-downs to make goods move quickly. High initial mark-ups have been necessary to make such operation profitable.

A retail tax, while perhaps more easily added to this class of goods, will accentuate style-merchandising control problems, necessitating still higher mark-ups and probably more numerous and larger mark-downs. A retail tax may appear inconsequential in the face of the major problems of style merchandising, but it must be remembered that nothing in the tax itself reacts to increase purchasing of style merchandise; moreover, the cumulative effect of the tax may work significant results in style lines where quick turnover and final sale of goods are essential to profitable operation. The operating effect of the tax on style merchandising, as well as on many other types of goods, is still further complicated by returns, customary prices, and price classifications.

Returns.—Style merchandise, shopping habits, and increased competition have led to quite general adoption of liberal customer-return policies. No real solution of this expensive problem has been found. It seems likely that returns will constitute a major problem for some time.

Most sales tax proposals impose a tax on "gross sales." While a store undoubtedly plans its mark-ups to cope with the return problem, a new factor of expense must be accounted for under a retail tax on gross sales, for the tax must be paid on all sales regardless of the fact that the merchandise may have been returned. The seriousness of this situation is shown by the generally quoted figures on customer returns. *The 1930 Merchandising and Operating Results for Department Stores and Specialty Stores*, issued by the Controllers Congress of the National Retail Dry Goods Association, shows returns from about 1% to 28%, women's style goods bearing most of the higher percentages. Average returns per store are about 10%.

Referring to the supposititious retailer with the $1,000,000 sales volume, it is found that, if his returns average 10% of gross sales, he incurs an additional tax (on a 2% rate) of $2,000, because he must make gross sales which include $100,000 of returns. His average additional mark-up must then be higher than the 2.1% originally planned, the result being an additional average retail mark-up of about 2.3%. In style goods the planned initial mark-up would then range up to 2.7% above the former mark-up to cover returns.

Next, the retailer must accept combat with the crudely developed and highly intangible subject of price psychology.

Customary Prices.—The first barrier to placing an additional mark-up on products appears in the relatively static conditions of many retail prices, "customary prices," as these have been termed. People are used to paying a certain price for an article and may do considerable shopping before purchasing at a higher price. This shopping may result in loss of sales by the

retailer who does not retain his customary prices.

For instance, books are almost universally sold at a standard price in all stores. The publisher's price is fixed to allow for a 20% retail mark-up, in some cases 25%. Sales are made in all stores at the customary price, the only important variation occurring in book sections of department stores where prices are sometimes cut below a profitable margin in order that certain books may be used as price leaders. The ordinary retailer of books has practically no chance to change his prices. So it is with many other lines. Men's branded shirts and custom-made suits, having sold at $1.95 and $22.50 respectively for years, cannot bear upward price changes readily. In still other lines the situation is even more difficult. Many drug items, for instance, customarily sell at a standard price which is really a cut price set by competition.

Price Classifications.—Many retailers have found greater ease of merchandise control through the establishment of price classifications. Prices are set at definite intervals designed to meet competition, cater to customers' price psychology, set a sort of customary price for the article, and eliminate the use of myriads of prices set haphazardly at a certain mark-up from cost.

Price classifications must undergo a revolution unless the retailer chooses to absorb the tax. Desiring to pass on the tax, the merchant has several methods open to him in approaching the price classification problem. He may (1) lower the quality of goods sold in the present price classes, (2) attempt to change his classifications or the goods sold in those classifications, (3) abandon the use of price classes or (4) shift the additional mark-up to goods not sold by classification.

(1) A purely price-appeal institution cannot shift its buying to a low price range; it is already there. Others can choose to buy cheaper lines only at the risk of their reputations for quality, coupled with the mark-down problem involved in the second method below.

(2) If the retailer attempts to change his classifications or to jump his goods to the next higher class, the consumer's reluctance to purchase will be apparent. The results of such a step will depend quantitatively on the particular articles so handled, but an increase in mark-downs appears unavoidable.

Mark-downs.—The importance of the mark-down problem cannot be overemphasized. The Harvard Bureau of Business Research shows that department stores reporting in 1930 had average mark-downs ranging from 7.4% to 9.2% of net sales. These are median figures and give only a slight indication of the amounts that specific stores may take in mark-downs.—Within departments the problem is even more acute. A not uncommon mark-down percentage in style departments ranges around 18% and in some cases exceeds 23% of net sales. When reduced to their cost equivalent, mark-downs represent an expense item larger in most cases than any item except total salaries and wages. With the Harvard Bureau reporting common figures for losses among department stores in 1930 of 0.5% for stores with sales over $2,000,000, the best-profit group, the significance of mark-downs is appreciated from their effect on profits. These figures are even more striking in a consideration of the common net-profit figures for the past several years, the highest figure being 2.2% net profit for the same volume group in 1927.

Into this managerial maelstrom is thrown the additional mark-up occasioned by the retail sales tax. Choose to place goods in a higher price classification, and customers will tend to force greater and more numerous markdowns to compensate for price increases. Decide to set new price classifications, and lose the prestige, goodwill, and perhaps competitive advantages of the present classes, disrupt the consumers' buying habits in regard to classifications, and face the still more intangible problem of the effects of odd prices.

Studies of the effect of certain prices on the salability of goods have been conducted from time to time, but the knowledge of price psychology available to the retailer is still primitive. Nevertheless, prices of 17¢, 19¢, 39¢ and 98¢, in the lower classes, and $29.75, $39.50, *etc.*, in the higher groups, are seen everywhere. Their very use indicates that the retailer, at least, believes them to have an effect on sales. Much that experience has taught will be lost in the forcing of price changes.

Faced with these difficulties, the retailer may well choose one of the remaining alternatives: (3) abandonment of classifications, or (4) shifting of tax costs to nonclassified goods.

Abandonment of classifications would generally be considered a backward step for retailing. The control facility gained by use of classifications undoubtedly justifies their use, as do the expense savings involved in the elimination of the necessity of handling heterogeneous masses of goods sold at entirely dissociated prices. Where price classifications have been well worked out, the losses through their abandonment would probably urge the retailer to the fourth alternative, a shift of the total costs of the tax system to unclassified goods.

Store Expense.—A tax would involve some store expenses in addition to those directly associated with the additional mark-up. Marking of tags, remarking, physical handling of markdown goods, and incidental accounting costs will arise. Under a general tax, however, where the retailer merely returns to the Government a blanket percentage of his gross sales, these costs will be at a minimum, because the retailer has entire flexibility of internal control in attempting to regain his tax costs.

When the retail tax varies from the general blanket rate, however, the retailer loses that flexibility of control and incurs not only the costs incident to the tax and pricing problem but also the very real expenses of tax administration. The variations may take the form of a sliding scale on various goods, may be limited to certain classes of goods, or may be applied to specific items. Consider, for instance, such a tax on certain luxuries as has received considerable attention from Congress. The retailer under such a tax, still faced with the problem of shifting the tax, is also forced to keep accurate records of unit or dollar sales of specific items that will pass government audit.

Trial and Error Adjustments.—Regardless of how well a retail merchant may analyze his particular position in relation to a retail tax, he cannot avoid a considerable, and perhaps costly, period of trial and error. Here the business cycle plays an important part. With business conditions as they are in 1932, the store is making every effort to avoid operating losses. To burden it with a retail tax is to present the retailer with a problem he cannot,

except in a few cases, solve. The tax merely intensifies his cycle by forcing him to raise prices when he must meet consumer demand for lower prices. Naturally, when business improves, he will attempt to recover his depression losses.

Conclusions

The mere mention of "tax" suggests controversy. The need for revenue is recognized, yet thoughtful and intelligent investigation and analysis of the effects of a tax should precede its establishment, or even its proposal. The analysis of the retail sales tax, attempted above, has led to several conclusions:

(1) The retailer will seek to pass the tax and its incidental costs on to the consumer along the lines of least resistance, thereby minimizing the possibility of injuring his net profits.

(2) The lines of least resistance are outlined by a consideration of the qualitative and quantitative aspects of the elements of his business situation in relation to his consumers' habits or necessities. Such elements include competition, brands, utility and unit values of goods, and style.

(3) These factors are not static, nor are they of equal effect. Therefore, a retail tax will not be passed on evenly to all consumers, although that is the intent of the tax.

(4) The additional mark-up, necessary in order that the retailer's net profits may remain unaffected, will be somewhat greater than the tax percentage itself even though applied evenly to all goods. This results from such factors as reduced volume, taxes paid on returned merchandise, and costs of administration.

(5) Since the tax cannot be applied evenly, the actual additional mark-up of goods to which it is applied will be considerably in excess of the tax percentage.

(6) Internal control of retail merchandising operations will become more difficult, and retailers will face new problems which may even force a retracing of some of the forward steps that have been made in the control of retail store operations. These problems include those of shifting the tax in the face of customary prices, price classifications, and price psychology, and control of the additional mark-up and of mark-downs.

(7) Variations from the general tax will tend to increase the difficulties and costs of administration by creating inflexible boundaries which prevent the retailer from following the path of least resistance.

(8) Because of the intangible or nonmeasurable elements involved, a period of trial and error cannot be avoided.

Thus, grave doubt is expressed that all retail merchants will be able to pass on all of the tax, plus additional costs of the tax, to the consumer.

CONSUMER PURCHASING-POWER INDICES

By HERBERT S. HOWARD

ONE of the most important movements in the last decade in the field of marketing management has been the attempt to "break down" the sales task by selecting small areas and relating the work accomplished in such areas to the potentials, or work which should be accomplished as shown by various measurements of consumer purchasing power and responsiveness. The philosophy behind this approach recognizes that total sales figures alone give a combination of results of many marketing areas, possibilities and kinds of efforts, and it is only by attempting to separate these and individually to examine them that intelligent sales control and sales effort can be effected.

Coincident with this movement there has been an enormous increase in the amount and kinds of data available on such small areas as the county, although it must be admitted that not all the data are available for such a desirably small area.[1] With this increase in data, the practical sales manager is confronted with the problem of deciding what data he is to use to get a reliable index of consumer purchasing power or habits, and in what manner he is to use them. In answer to this problem, almost as many indices and methods of combining data into an index have been devised as there are different kinds of data. The purpose of this article is to examine the more prominent indices with a view to ascertaining the more important principles and methodology involved. Out of the many indices examined, those best illustrating the various types of indices and their weaknesses and limitations, and best bringing out the more important principles, have been chosen for discussion. The study is undertaken from a practical sales-manager standpoint; no technical statistical approach is attempted.

At the outset it must be recognized that no general index will do for use with every product. Each product has individual characteristics which influence the demand for it in different ways. Thus, any index for a particular product or a particular use must be suited to the product or the use to which it is to be put. Nevertheless, the principles involved in a general study of this nature will apply to the individual problem met with by the individual sales manager.

The distinction between the *ability* to buy a product and the *willingness* to buy must be kept in mind. Some of the general indices attempt to reflect both, while others concern themselves with only the ability to buy. Use of the index in the latter case, with this limitation in mind or with other factors representing willingness to buy, is contemplated. In many cases, the successful adaptation of a general index, particularly of the latter type to a specific use, is possible and often accomplished.

Consumer purchasing-power indicators, of the type we are interested in, generally appear to divide themselves into five broad groups as follows:

[1] Of course the only reason for accepting data on a county basis is that it is difficult, if not impossible, to get it on any other small-area basis. Purchasing habits and areas do not follow or coincide with such county lines, but we must accept such data as are available for the time being.

1. Those based on a single factor or single series or group of related factors, such as the distribution of residence telephones or the circulation of a magazine or group of magazines.

2. Those based on studies of family budgets.

3. Those based on factors thought to have some relation to the demand for a product, the selection and method of combination of which is a matter of judgment, arbitrary choice, and guesswork.

4. Those based on a cooperative territorial analysis of sales of large manufacturers, whose products have national distribution and universal appeal.

5. Those based on a scientific approach to the problem through the use of correlation principles.

An examination of one or more of the indices of each group follows.

Single-factor Indices

Examples of the first group of indices are the distribution of residence telephones, an index of industrial workers' earnings, or the circulation figures for such a group of magazines as the Curtis publications: the *Country Gentleman*, the *Ladies' Home Journal*, and the *Saturday Evening Post*. Indices based on such factors have the advantage of being simple, easy to use, and usually readily available, depending of course on the particular index.

Such indices are, however, open to serious objections. There is often an insufficiency of data and a lack of timeliness and thoroughness which invalidate them. The degree of difference in consumer purchasing power or willingness to buy between various territories is not shown, while many important considerations, such as differences in incomes, buying habits and other factors, are omitted entirely. In an index such as that based on telephones, marked inequalities exist;[2] on the other hand, one based on workers' earnings, for example, would not be representative of all those living in a community, because agricultural, entrepreneur activity and other income sources are not represented.

Magazine-circulation indices are open to the following outstanding objections: (1) Circulation distribution is affected materially by the character and activity of sales effort, which may differ materially in various territories. Premiums and sectional promotional campaigns result in "forced" circulation which is not accurate as a purchasing-power index. (2) Reading habits are not necessarily conclusive indications of general ability or willingness to buy any particular group of products, particularly when low-priced magazines are considered. (3) A comparison of figures of magazine circulation for different magazines reveals a marked lack of agreement. Obviously, not all are correct, and the difficulty of ascertaining which one is correct makes doubtful the value of choosing any. (4) Such indices represent a complex of several fundamental factors, such as percentage of native white population or of literates, and so on, which it would be better to ascertain and use directly. These objections often apply to other single-factor indices also.

In unusual cases a single-factor index may be quite satisfactory—where one has a simple attachment for a Ford car, for example. But, in the main, one or more of the above objections will

[2] For example, in Chicago 62% of the homes have telephones, while in Philadelphia only 37% have telephones. Illinois has 536,000 dwellings less than Pennsylvania and has 270,000 more telephones. *Sales Quotas*, (Curtis Publishing Company, Philadelphia), p. 12.

always be applicable; this leads to the conclusion that such indices are of doubtful value generally.

Budget Indices

Detailed studies of expenditures as shown by family budgets serve as the basis for the second broad group of purchasing-power indices. Rather than use figures of sales to consumers, this method concerns itself with facts secured directly from consumers and reflects the relationship of different types of expenditures as affected by varying incomes and sizes of families. Through such an approach, one can judge the population's reaction in making adjustments in various types of expenditures under the pressure of different conditions. Being based on what people actually buy, thus representing willingness-as well as ability-to-buy characteristics, it appears particularly sound; the information given is for groups of products rather than for any particular product, however.

Certain facts, however, destroy the practicality of such a basis, at least for the present. It is obvious that budget studies for the whole United States could not be made because of the expense and time involved, as well as because of the changes always taking place, which would weaken such data as are relatively old. In using any localized study, therefore, one would presumably relate the given data to the distribution of national income-tax returns, in view of a lack of a better source of county-income data, which latter data omit many important income sources and are not available promptly enough to be of great use. Moreover, differences in costs of living are not reflected in such statistics, which vary greatly as between large cities and rural communities, for example.

In addition, the general application of such an index to the country as a whole is by no means clear. Such studies as have been made choose a so-called "typical" city, of which there are said to be only a few.[3] Disregarding the fact that such a study would not represent agrarian purchasing habits, the fact that considerable search had to be made to find the "typical" city indicates the degree to which a general application to other cities would be erroneous. We are concerned with an index which will "work" for the country as a whole and not for selected cities only. The possibility of ever overcoming this objection may be slight; additional studies of other territories, however, to ascertain the degree to which the above objection is applicable, would seem advisable before too much reliance could be placed on such budget studies as are available. By the time such studies could be made, if at all, present data might be out of date.

About the most, then, that could be said for this type of index is that it appears to be particularly sound in being based on what people actually buy. Until further work has been accomplished along this line and the outstanding objections minimized, its use does not seem practical.

Judgment Indices

The third broad group of indices includes those based upon factors

[3] The most recent and an excellent example of such studies is that made by Time, Inc., the results of which are given in their publication, *Markets by Incomes*, in two volumes, published by themselves in New York in 1932. For an excellent discussion of this type of index see Berridge, Winslow & Flinn, *Purchasing Power of the Consumer*, Book II. Chicago: A. W. Shaw Co., 1925.

thought to have some relation to the demand for a product, the selection and method of combination of which is a matter of judgment, arbitrary choice and guesswork. A most recent and typical representation of such an index is that formulated by O. H. Cheney[4] for the purpose of affording a potential purchasing-power index for the book industry. It is very complicated, both a "cultural" and an "economic" index being made up and ten or more factors in each being used.[5] The two composite indices are then united to form a single index by the simple method of averaging the two. The index is then compared with the sales of books by states as shown by the Census of Distribution figures for sales by bookstores. The failure to obtain a good degree of correlation is attributed to the inadequacy and incompleteness of the actual sales data, no mention being made of possible similar characteristics in the index itself.

It is obvious that the factors chosen and the weight given to each, as well as the method of their combination, depend entirely upon the judgment of the one making the index; with individuals of varying personalities, background and experience making the choice, almost any conceivable series might be arrived at. The scarcity or availability of various data may affect the choice considerably. In the above-mentioned index, apparently any data available that had the slightest economic relation to the subject were used. The justification for weighting the "cultural" and "economic" indices equally is not apparent. The validity of the weighting is questionable in the case of every part of the index, particularly since some items are often repeated in other items, thus giving additional weight to the former. For example, income is reflected in passenger automobiles owned, retail sales, and so on. Unless this fact is clearly recognized, a weighting of factors in an entirely unsuspected manner may result.

On the whole such indices lack a true scientific base, involving more guesswork than anything else, for which reason it is difficult to place any great reliance on the chosen index without empirical or other substantiation.

Cooperative Territorial Analysis

The Fuller Brush Company, in cooperation with nine other national distributors of consumer goods, has devised a most intelligent basis of determining an index of market responsiveness which exemplifies the fourth broad group mentioned above, *viz.*, that based on a cooperative territorial analysis. The method[6] involves the formulation of an index showing the combined percentage distribution of sales of these ten companies throughout the United States.

The advantages claimed for the method are accuracy, simplicity and economy. The percentage distribu-

[4] Cheney, O. H., *Economic Survey of the Book Industry, 1930–'31.* New York: National Association of Book Publishers, 1931.

[5] Among the cultural factors of which the final index is a composite are the following: distribution of population in professional services; index of library development and use (an index itself based on three factors—borrowers' cards, number of volumes, and increase in volumes); various "indices of reading"; church membership; *etc.* The economic factors include: distribution of available income; retail sales; index of automobile ownership; *etc.* The manner of combination of these individual components is not indicated in published information at present available.

[6] Smith, E. R. & P. W., "Determining a Sales Quota Basis through Cooperative Territorial Analysis," IV HARVARD BUSINESS REVIEW 1, October, 1925, p. 49.

tion of sales of each company (which violates no confidences regarding sales volume) is submitted to a central clearing house for compilation into the combined index. Much of the necessary data would ordinarily be compiled by each organization anyway, and the combined compilation is a simple matter. The index represents actual sales accomplishment, thus indicating willingness and tendency, as well as ability, to buy. In addition, the index can be kept up to date, and through its use trends in buying habits in various sections may be noted.

To be successful, however, this method must conform to several requirements. First, the index must represent a group of commodities typical of that in connection with which it will be used—a group which can be expected to represent fairly well the average sales of all such commodities. It will have to represent different types within the same general group in order that the necessary cooperation may be secured. The commodities will also obviously have to be nationally known and to have wide general use, with extremely good distribution throughout the country. The sales records will have to be kept according to counties. The objection, that sales records reflect inequalities in sales efforts and disregard potentialities, is said to be minimized in this method, provided that the above requirements are met; such inequalities will be "washed out" in their combination and will be less important in the case of the larger organizations. This assumption is undoubtedly true to a considerable extent if enough companies with the desired characteristics can be found, although unusual policy changes or "drives" in particular territories of a single dominating company (with respect to volume) may affect the final index considerably in an undesirable way.

A typical combination of such a group would be manufacturers of brushes, tooth paste, soap, magazines, toilet ware, cereals, and articles of a similar nature. Again, life insurance sales of all companies would undoubtedly give a very close approximation to the general market for life insurance in any given section as compared with the country as a whole, even though no single company covers the entire country evenly.

However, the difficulty of finding and gaining the cooperation of a sufficient number of companies, in representative commodity groups which would meet the necessary requirements and would give assurance of the "working out" of sales inequalities and so forth in the combination of the percentage figures, would seem to limit the use of this method to a small group of large distributors, who must be extremely careful in its use. The fact that organizations carrying competing lines could well refuse to exchange figures increases the difficulty of compiling such an index. Nor has the altruism of companies carrying on this method yet resulted in their releasing such an index for general use to those distributing similar products, although the available work of the Life Insurance Sales Research Bureau, later referred to, has been developed from this general approach.

Therefore, although the index represents a distinct contribution to this subject and appears to have a particularly sound basis for use as an index of market responsiveness, possessing many characteristics lacking in the other indices, the general unavailability of the necessary data and the

limited application of the method destroy its value generally from the standpoint of the average company.

Scientific Correlation Indices

The fifth broad group of indices are those based on a more or less scientific approach, the scientific aspect of which is provided by the use of correlation principles and methods, involving the measurement of the interrelation of two or more sets of data. As has been mentioned above, many of the data for which an index is desired are on an area basis too large to be of use, such as a state, or are available for a limited area only, such as the counties in a single state.

It is reasoned, for example, that if we take factors available on a county basis which have some relation to the *known* data and combine the state totals of such county data so that they are in harmony with the *known* state data, an estimation of these *known* state data on a county basis can be gained by the application of the *chosen* factors to the county in the same manner in which they were found to compare favorably to the *known* state data. This is the fundamental reasoning upon which this method is based. To repeat: data are known for each state. An estimate of data for each county is desired. The former data are not available by counties, although *other* data which have some relation to the original data are available. If these *other* data give a close index of the *known* state data, they can be assumed to give similarly accurate results for counties for which the original data are not known. When the *other* data give a close index to the *known* data, a satisfactory correlation is said to be present. The measurement of this relationship is expressed statistically as the "coefficient of correlation,"[7] the significance of which depends upon the economic conditions explaining the correlation, if any.

There are four outstanding examples of this type of index;[8] space will permit description of only one. Since H. G. Weaver's *Basic Purchasing Power Index by Counties* is typical, it has been chosen for discussion. Weaver's index, although originally approached with the desire to find a basic guide to automobile advertising and sales effort, has "necessitated an extensive inquiry into economic fundamentals," which " . . . has resulted in the development of an index so basic in its nature that it may be used as a formulation upon which to build sales quotas for practically all kinds of consumer merchandise."[9] It primarily reflects ability to buy, disregarding willingness to buy. Since incomes are the main indication of this, income data alone were considered. Such data are not available by counties, but fairly reliable estimates were made by states,

[7] "In a very inexact and broad sense, a coefficient of correlation of .90 means a relatively high degree of correlation, while .50 indicates usually a more or less indifferent degree." Brown, Bingham & Temnomeroff, *Laboratory Handbook of Statistical Methods*. New York: McGraw Hill Book Co., Inc., 1931. P. 237. An estimate of error is probably a more significant figure, although the significance in any case depends upon the economic conditions within the case.

[8] These examples and sources from which descriptions may be gained are: (1) Weaver, H. G., "Basic Purchasing Power Index by Counties," IV HARVARD BUSINESS REVIEW 3, April, 1926, p. 275. (2) The McCann Ericson Index developed by L. D. H. Weld and described in *Printer's Ink*, July 31, 1930, and six subsequent issues in an article, entitled "Measuring Sales Potentials." (3) Life Insurance Sales Research Bureau Index of Insurance Buying Power described in the Life Insurance Sales Research Bureau's *Quarterly Review*, July, 1925, p. 27 *et seq.* This index has since been revised but not yet published. (4) The Batten Buying Power Index of the Batten, Barton, Durstine & Osborne Company, of which there is no published information.

[9] *Op. cit.*, p. 275.

based on estimates and data furnished by the National Bureau of Economic Research. This was taken as the *known*[10] factor. To determine the *chosen* factors, over 1,000 correlation tests were conducted for various data having an economic relationship to income. Through the application of more refined correlation methods than those described above, four factors giving the most satisfactory correlation were ascertained,[11] as follows:

1. Percentage of income-tax returns.
2. Percentage of retail outlets.
3. Percentage of value of products.
4. Percentage of total population.

In determining the method of combination of these four factors, it was discovered that various sections of the United States gave different degrees of correlation when the same method was used throughout the country. Since this could be satisfactorily explained by economic and geographical differences, the states were divided into those having essentially similar economic characteristics; the method of combination having the highest degree of correlation for each group was then used, whether it was the same as that used in other groups or not.

All that then remained was the application of the method to county divisions. The purchasing power for a county as a percentage of the state figure having been found, it was simple to ascertain the county purchasing power in dollars from the known state figure. Dividing such by the county population gave the *per capita* purchasing power in the county.

Such is a practical application of the correlation method. Through the use of sales by counties[12] of a single state, an index of potential sales for the whole United States has been similarly gained. The Life Insurance Sales Research Bureau has used life insurance sales for all companies available on a state basis only, to develop a potential insurance-buying-power index by counties.

What is the value of this method? It is readily seen that it is a complicated procedure and that it may be quite expensive and involve considerable time; most important of all, it must have some "known" data, of a reliable nature, with which the "chosen" factors can be correlated. Its validity is based as much on the economic basis for any correlation existing as on the correlation itself. Moreover, to ascertain the continuation of the correlation, constant rechecking is necessary. Even then it is seen that absolute accuracy is impossible, a limitation that must be kept in mind.

On the other hand, this method is based on a solid scientific approach which provides a means of *checking* the factors used in the index and their method of use, thus removing the one real objection to the third method described, *viz.*, the "Judgment Indices." The objection of no absolute accuracy is, of course, not strong, since the method "reduces the amount of guesswork" to a greater degree than the other practical methods; the attain-

[10] *Known* and *chosen* are used as in the explanation of this method on the preceding page.

[11] These "more refined methods" involved the use of "partial" or "net" correlation, which measures the relation of one factor to another when all other factors are held constant, thus eliminating duplicating factors; as distinguished from simple correlation, in which "all other factors" are ignored; and the use of "multiple" correlation, which measures the combined effect upon a single variable of a number of factors, the latter being used in arriving at the method of combination of the chosen factors.

[12] The McCann-Ericson and the Batten Indices both used the Retail Sales Data of Pennsylvania, furnished by virtue of their county sales tax on a county basis.

ment of absolute accuracy is probably never possible. With regard to its lack of simplicity, we cannot refrain from using Mr. Weaver's words which so aptly meet this objection. They are as follows: "It is far better that the quota be right than that it be simple. If it is correct, or reasonably correct, it is not difficult to sell it to the salesman or dealer. If it is wrong, I do not care how simple it is, it will not stay sold even if you are able to sell it in the first place . . . We, in the field of market analysis, should interest ourselves in finding something that will work rather than something that is simple . . . The problem is too complicated to permit of simple treatment."[13]

Summary and Conclusion

To summarize, it has been seen that the use of a single factor or group of similar factors as an index of consumer purchasing power, although possessing the outstanding advantage of simplicity, is of doubtful value; not only because of the lack of a definite measurement of all the factors influencing the demand for a product, but also because of the inequalities likely to be existent in such an index.

The use of budget studies in formulating the desired index appears to rest upon a sound, logical basis, but the work and research necessary to assure a valid index have not yet been carried far enough. This assumes that the expense itself is not too great.

The formulation of an index by the arbitrary choice of factors, thought to have some bearing on the problem, is probably the most common method. It has in it, however, so much of arbitrary judgment which is often reduced to mere guesswork, and results in such widely varying results, that little confidence can be placed in such a method. It lacks a scientific approach and does not, therefore, fully meet the requirements of the practical sales manager.

The use of cooperative territorial-analysis methods appears particularly sound, since it is based on actual sales accomplishment and represents a measurement of actual "market responsiveness." However, the general unavailability of the necessary data and the limited applicability of the method destroy its value generally from the standpoint of the average sales manager.

Finally, the correlation method appears to have in it more of real value to the practical sales manager and to be more reliable than any other basis, provided that a "known" factor is present, an economic basis for the correlation is existent, and sufficient intelligence is applied to its use so that its limitations will be recognized. The superiority of the method rests upon its scientific approach, which provides a basis of fairly definitely ascertaining whether or not the factors used and the method of their combination are sound in fact, as well as in theory.

In conclusion, several general observations might be made. It is evident that the more reliable indices are not necessarily simple. The importance of judgment in both formulating and using the index is obvious. "The possibilities of misinterpreting and misusing measures of potential demand are fully as great as the possibilities of error or bias in making the measures."[14] In this connection the danger

[13] Weaver, H. G., "Territorial Market Analysis," 32 *Marketing Executive Series* 5. New York: American Management Association, 1926.

[14] Gustavus Camera Company Case, 5 *Harvard Business Reports* 370.

must be guarded against of unconsciously accepting a mechanical device as perfect.

The possibilities of combining the results of different methods and cross-checking offer many opportunities.[15] As more data become available from such sources as that afforded by the Pennsylvania Sales Tax or through the Retail Distribution Census, the task should be made easier. Concerning this, the following quotation from a recent Department of Commerce publication is pertinent:[16] "The figures for total retail sales by counties are the first accurate index, on a nation-wide basis, of geographical variations in the amount of money spent in retail purchases by our population. Although not entirely coincident with geographic variations in purchasing power, they nevertheless form the best indication of such variations that has ever been obtainable. They should find wide application in checking the accuracy of other purchasing-power indices and as one factor in establishing sales quotas." The Census data give information for groups of products as well as totals and represent the most pertinent and valid information yet collected on this subject, although it must be remembered that what sales have been in the past is not necessarily indicative of what they should be or will be in the future.

An objection often heard with respect to such indices concerns their lack of timeliness. In answer to this, various current data are suggested through the use of which this defect can be eliminated. For example, the ratio between the number of applicants for employment and the actual employment available in the public employment offices, or an index showing the fluctuations in the relief expenditure and case loads of welfare and relief agencies, may have some significance as reflecting changes in employment conditions and consumer purchasing power. Again, data furnished by the various business services attempt to reflect the degree of change in purchasing power throughout the United States.[17] All such data are weak, however, in not reflecting accurately degrees of change, while their significance for any particular index or product may be open to question.

However, some kind of a forecast is implied whenever such indices are used; the assumption is made that conditions will prevail in the future similar to those which have existed in the past. What is more important, however, is that the indices in which we are interested are used mainly to show sectional differences and not yearly differences, for which reason the attempt to correct the lack of timeliness may be unnecessary, except where changes are not equal throughout the United States. The indices are used, moreover, to work out broad policies over a period of years, so that accurate year-to-year adjustments may not be absolutely necessary, however desirable.

[15] The checking of several indices by large organizations' combined sales or the combination of Weaver's index with the budget study are possibilities.

[16] *General Consumer Market Statistics*, Domestic Commerce Series 56. Washington, D. C.: Department of Commerce, 1932. P. 73.

[17] Brookmire's Sales Map, for example, is based on the estimated consumer income as a percentage of a year ago and of the last three years, while that of Standard Statistics is based on bank debits, and that of Babson's on business volume.

SECURITY AFFILIATES AND SECURITY OPERATIONS OF COMMERCIAL BANKS

By STEVEN L. OSTERWEIS

AMONG the unfinished legislation of the Seventy-second Congress is the Glass Bill, an attempt to remedy the weaknesses in our financial and banking mechanism which this depression has disclosed. As one of the most prominent of these weaknesses, the act selects security affiliates and security operations of commercial banks and proposes the complete elimination of such investment-banking activities from Federal Reserve member banks.[1] Because not all are agreed that this is the most desirable course of action, because further discussion will necessarily ensue before final passage of any law, and because the Democratic party has given this issue a place in the present campaign,[2] a consideration of the whole movement of commercial banks in the security business is timely. This paper, therefore, attempts to outline briefly the growth, function, and significance of security affiliates in the banking structure, and to indicate some of the factors by which future legislative action should be controlled.

This discussion cannot be restricted, however, to security affiliates,[3] but must consider as well the whole scope of investment-banking operations in commercial banks and, what is more, the broader question of "financial integrations." This apparent "merging" of two types of banking functions within one institution is not an isolated phenomenon, but is rather just one phase of a movement tending to eliminate the boundaries between different financial activities, which, reaching its peak in the "new era," manifested itself in the following forms, among others:

1. Underwriting and distribution of new issues by brokers.
2. Investment-trust flotation and management by brokers.
3. Commercial and deposit banking by private investment houses.
4. Trust activities of commercial banks.
5. Real-estate mortgage and title business, foreign-trade financing, financing of margin-stock trading (brokerage) carried on by many commercial banks.

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[1] "The business of purchasing and selling investment securities shall hereafter be limited to purchasing and/or selling such securities without recourse, solely upon the order and for the account of customers . . . and no such association shall underwrite any issue of securities."—Proposed "Banking Act of 1932," S. 4412, Sect. 15, *New York Times*, March 17, 1932.

[2] Platform adopted by Democratic National Convention, June 30, 1932. "I. WE ADVOCATE: . . . 11 . . . The severance of affiliated securities companies and the divorce of underwriting schemes from commercial banks; . . . "—*New York Times*, June 30, 1932.

[3] "A security affiliate shall be defined as a corporation;—

1. A part or all the stock of which is deposited in trust for the benefit of stockholders in the bank; or
2. The shares of which are sold in units in combination with shares of the bank; or
3. A controlling interest in which is held by the same interests which control the bank; or
4. A controlling interest in which is held by the bank; or
5. A controlling interest in which is held by some other security affiliate of the bank."

Definition for questionnaire as quoted in the Hearings before a Subcommittee of the Committee on Banking and Currency, United States Senate, 71st Congress, Third Session, pursuant to S. Res. 71, p. 1054.

The History of Financial Integration

Neither this broad movement of financial integration, nor the narrower one of allied investment and commercial banking, is particularly new; neither is a by-product of the 1920's. In the 1830's, there were no specialized investment-banking organizations; commercial banks, of necessity, performed this function.[4] However, even when private bankers had developed, the banks were still in the investment-banking business. We find an advertisement, in 1870, of a bank acting in connection with the flotation of an issue of railroad bonds.[5] By the panic of 1907, banks and insurance companies[6] had become heavily involved in the investment-banking business, and the "money trust" was a very live thing.

The Pujo ("money trust") investigation of 1912–13 was a result of this panic and of the financial interrelationships believed by many to have been the cause thereof. Much evidence was found by these Congressmen of close, if not legally binding, affiliations between investment houses and commercial banks;[7] of the active participation of banks and trust companies, as well as of their officers, in underwriting syndicates;[8] of affiliations between state and national banks,[9] and between the latter and nonbanking corporations.[10] In general, the investigations of that time covered much of the field of the recent inquisitory activities of the Government and provided some of the evidence upon which the Federal Reserve, Clayton, and Federal Trade Commission Acts of 1913 and 1914 were based.

The first important security affiliate, First Securities Company, was incorporated by the First National Bank of New York and was owned by its stockholders in 1908. After that, growth of the movement was moderate until the post-war decade of common stocks when it was given a great impetus, so that, by 1931, it was reported that there were 285 national-bank affiliates in addition to those connected with state institutions.[11]

[4] "There was at this time in New York City no group of bankers which corresponded to what we know today as investment bankers. The investment function was exercised by commercial bankers, who combined the investment business with their commercial-banking business, and by brokerage houses."—Meyers, Margaret C., *The New York Money Market*—Vol. I, *Origins and Developments*. New York: Columbia University Press, 1931. P. 25.

[5] Gallatin National Bank, on an issue of East Tennessee, Virginia & Georgia R. R. bonds. *Commercial & Financial Chronicle*, December 10, 1870, p. 740.

[6] Armstrong Committee of the New York State Legislature, of which Charles Evans Hughes was special counsel.

[7] Hearings under H. Res. 429 and 504, p. 1031: J. P. Morgan & Co. and the Morgan banks.

[8] *Ibid.*, p. 1272: "A partner of W. Salomon & Co. gave testimony to the effect that in one syndicate operation over one-fifth of the participations had been by banks and bank officers."

[9] *Ibid.*, p. 1655: "Continental National Bank of Chicago, in early 1900's, arranged an affiliation with American Trust & Savings Bank by stockholder ownership."

[10] *Ibid.*, p. 1406: "At time of investigation, 12 national banks with a capitalization of $82 million had affiliations with security companies or state banks."

[11] *Journal of American Bankers' Association*, March, 1931, pp. 757–8. Since this date, some of the larger banks have abandoned their affiliated companies, or have consolidated their activities with the bond departments of the bank.

October, 1931—Bancamerica-Blair was separated from the Bank of America.

October, 1931—Chatham & Phenix Trust Co. discontinued the securities-distributing business of their affiliate.

October, 1931—Bankers Trust Co. eliminated the Bankers Co. as a corporate entity.

December, 1931—International Manhattan Co., security affiliate of the Manhattan Co. group, was discontinued and its activities taken over by the Bank of Manhattan Trust Co.

December, 1931—Chemical Securities Co. was merged with the bond department of the Chemical Bank & Trust Co.

These affiliates were organized, for the most part, in the same manner as the first one; namely, by having stock of the affiliate held by the bank stockholders, or in trust for them. This method permitted identity of ownership and made it impossible to buy or sell the bank stock without a proportionate share in the affiliate. While the situation has been complicated in several organizations—by having affiliates own other affiliates; or by direct ownership by the bank, in the case of some state banks; or, in group banking systems, by using the holding company for the ownership of both affiliates and banks—the method of the First National Bank is still the most generally used.

The rise of these organizations seems an integral part of the movement into public financing as opposed to bank loans;[12] a movement which is traceable partly to the widespread government financing during the World War, by which the public became acquainted with securities. In view of this trend away from bank credit, it seemed necessary to many bankers that they actively engage in the newer types of financial activity to preserve their volume and profits; it seemed advisable that they capitalize on the advantage they had in security distribution, because of the fact that to many people they seemed the sole source of investment advice; and it seemed desirable that they be in a position to offer new and complete services to borrowing and depositing customers. When the movement turned away from bonds to stocks, national banks were forced to form affiliates or lose their business; state banks saw these affiliates as a means of circumventing state banking laws and of getting extrastate distribution by means of branches. In general, the mechanism of security affiliates provided a means of evading legislation, seemingly restrictive of bank profits.

Whatever the reason, by 1930, security affiliates were the most important part of the investment-banking field, particularly in distribution. Whereas, in 1927, they had been responsible for 12.8% of the originations and 20.6% of the participations (including originations), in 1930, they took about 40% of the originations and over 54% of the participations.[13]

Operations and Practices of Affiliates and Their Dangers

Bearing in mind these facts as to the importance of affiliates and their relation to other financial tendencies, a presentation of their operations and practices and a statement of the arguments advanced for and against them are in order.

Underwriting.—This is probably the most important activity of the affiliates of large city banks. The danger to sound banking in this operation arises out of the dependence of investment-banking institutions upon borrowed funds for the purpose of carrying securities in the process of sale. To the extent that affiliates secure this money from the parent bank, it is claimed,

[12] "In 1924, commercial loans were twice new corporate issues; in 1929, new corporate issues exceeded commercial loans."—*Magazine of Wall Street*, November 28, 1931, p. 123.

[13] These figures were presented by Mr. Mitchell of the National City Bank, and, while they may not be wholly accurate, give a clear and indisputable indication of the trend. In fact, if banks and trust companies are included with bank affiliates, the 1930 figures show them to have accounted for over 60% of total participations and orignations, as compared with 36.8% in 1927.—Hearings before a Subcommittee of the Committee on Banking and Currency, U. S. Senate, 71st Congress, Third Session, pursuant to S. Res. 71, p. 299.

there is a disadvantage in the system; even though the loans are largely secured, if the collateral should fail the bank would be very much in the position of having made a loan to itself, which in times of stress might be "frozen." While there is no dependable measure of the extent of affiliate borrowings from parent banks, the few figures available (and these do not include repurchase agreements) indicate that banks might have supplied somewhere in the vicinity of one-half of the necessary short-term funds.[14]

Retail Distribution.—This function is the dominant one in the affiliate system as a whole, and, because most of the banks' customers are aware of the retailing operations of the security affiliates, it becomes peculiarly important in relation to goodwill and public sentiment. The possibility of nation-wide distribution, and the consequent publicizing of the bank's name, are thought by some bankers to be advantageous; the widespread knowledge of security operations, and the association of them with the parent bank, however, contain elements of danger, since loss of public confidence and even bank runs may result from such notoriety of faulty affiliate practices.

A further danger, connected with the retail distribution of securities, arises out of the fact that one of the most fertile markets for affiliate issues is their own parent banks.[15] Opponents of the system have denounced this relationship because of the possibilities of overselling and of unloading slow-moving issues onto the banks. However, when they carry the analogy further, and fear that trust investments are likely to suffer, it seems that they proceed on insufficient evidence; there have been no dependable data of trust funds absorbing affiliate issues to any significant extent. On the other hand, many trust departments or affiliated trust companies avoid issues of the security company and err, perhaps, in the direction of caution.

Investment Trust.—More obscure have been those affiliate activities in which the security company has operated as a holding company or investment trust. There is, however, clear evidence that these companies have carried blocks of securities for control or long-time speculation, either because of the bank's legal inability to do so or because of its desire not to have such securities appear in its own portfolio.[16] In operations of this sort there is the possibility that the affiliate will take risks, because of its awareness of the strong backing of bank assets, and the bank may thus have to overextend credit. Similar abuses are possible with the affiliate holding real estate.

Dealing in Bank Stock.—Another type of endeavor, and one particularly susceptible of abuse, is the affiliate's dealing in the stock of the parent bank and supporting the market for it. This was one of the principal activities of the affiliates of the Bank of United States,[17] and the disastrous results there would seem to be indicative of the dangers attached to this practice.

Affiliate Operations in Group- and Branch-banking Systems.—The purposes for which most group- or branch-

[14] *Ibid.*, p. 1065: Total borrowings of eleven affiliates at the end of 1930, when compared with the average indebtedness of these same affiliates to the parent banks, indicate that 50% or less of the affiliates' borrowed funds come from the parent bank. This is a very poor basis for such an estimate, but, being the only one available, is used.

[15] *Ibid.*, testimony of Mr. Mitchell of National City Bank, p. 300; testimony of Mr. Robinson of Security First National Bank of Los Angeles, p. 338.

[16], [17] *Ibid.*, p. 1058.

banking systems have been formed make a security affiliate an essential part.[18] Since one of the objects of group banking is centralized supervision of unit-bank operations, a security affiliate, which aids in the direct control over investing policies, seems an integral feature of such a system. Testimony of Mr. Thomson of the Northwest Bancorporation showed that, in some seven issues originated by affiliates, an average of 6.3% of the offerings had been taken by banks of the group.[19]

In addition, a group-banking system with an affiliate presents an ideal method of retailing securities, since the component banks (even if not allowed by law to deal in securities) can act as intermediaries between the customers and the affiliate. The Marine Midland Corporation illustrates such practices without the use of affiliates.[20]

A peculiar phase of affiliate operation, found only in group-banking systems, is the activity as an "assets realization company." In the Giannini system, the National Bankitaly Corporation performed such a function,[21] taking over the slow assets of component banks and turning them into cash; thus, it made the banks' condition seem clean for the purposes of examination, but it improved the condition of the whole system not a whit.

Advantages Claimed for Affiliate Operation

The above are some of the typical features of affiliate operations, as they have existed in the recent past. The characteristics of these operations, capable of abuse, are therefore denounced by the opponents of the system. As in all things, however, there is another side; advantages to the parent bank, the public, and the borrowing corporations have been eagerly attributed to affiliates by their proponents. Briefly, these advantages may be summarized as follows:

1. Banks, making loans on collateral, will be better able to judge the value of the pledged securities because of the contact with actual conditions in the security market given them by their affiliates.
2. Research of the affiliate will be of further value to the bank in aiding it to invest intelligently.
3. Contacts of affiliates may bring business to the bank, and *vice versa*.
4. Affiliates enable customers to secure complete financial service under one roof.
5. The large assets of the bank add to the stability of the affiliate in times when private bankers might be forced to take losses on distress selling.

Profitableness.—The hope of large profits has been the principal reason for the formation of these organizations by banks. Although few of the banks publish separate statements for their security companies (a condition which works a disadvantage to bank stockholders), those that have done so indicated large profits in 1927, 1928, and 1929, and, to some extent, in 1930.[22] Present conditions in the security markets, however, and the nonexistence of new issues, make profits

[18] *Ibid.*, testimony of Mr. Robinson, p. 339.
[19] *Ibid.*, p. 574.
[20] *Ibid.*, p. 1215.
[21] *Ibid.*, pp. 1480–1.

[22] Profit figures are deceptive because fluctuations in the value of portfolio are not treated in a uniform manner. In 1930, for instance, most affiliates showed profits, which were, however, overbalanced by unpublished declines in security values.—Hearings under S. Res. 71, p. 1061. With this limitation in mind, profit figures for the last four years of First Securities Corporation and Chase Securities Corporation are presented, these being two of the largest security affiliates which publish separate figures.

almost impossible, and the recent abandonment of some affiliates is traceable to that fact.[23]

The previous discussion has noncritically presented arguments for and against affiliates, but it is clear that these are for the most part hypothetical. The advantages, gleaned largely from the testimony of bankers before the Glass Committee (S. Res. 71), seem to be attempts at rationalization, attempts to support the evident profit motivation with some form of economic reasoning. Those gains claimed for the parent bank seem outweighed, or at least balanced, by the dangers attached to such affiliations by the loss of goodwill frequently resulting from them and the consequent diminution of long-run profits; there seems to be little or no basis for claiming that banks, largely inexperienced in this field, are better qualified to underwrite and distribute securities than are private investment houses.

On the other hand, it appears that the evils, on the basis of which the affiliate system has been denounced, vary to a large extent with management and its ability to appraise risks and safeguard depositors' funds. To condemn the whole system, because of the flagrant abuses seen in some isolated cases, is unsound.

	Chase Securities		First Securities	
	Profits*	% of Bank Profits	Profits*	% of Bank Profits
1928	4,652	†	5,585	47
1929	5,766	32	6,367	50
1930	6,990‡	†	4,081	32
1931	§	.....	2,548	46

* In thousands of dollars.
† No bank profits available.
‡ Includes net profits of two other affiliates.
§ Securities business merged in July with Harris-Forbes.
Source: *Moody's Manual.*

[23] See footnote 11.

The Present Situation

The foregoing brief survey of the history and operation of security affiliates and security activities of commercial banks would seem to indicate that this relationship, while capable of being abused, is not in practice so vicious as its critics would hold. It does not seem to have caused so many bank failures as have "frozen" loans or the sudden deflation of "liquid" secondary reserves.[24] While this integrating of investment with commercial banking seems unlikely to add to the safety of bank deposits, management and effective supervision appear able to combine them without diminishing this safety.

Furthermore, banks do not seem to have effected any revolutionary change in investment banking. The tendency of this fraternity to indulge in "high-pressure" selling cannot be ascribed wholly to the banks, although they joined actively in the movement; it has been rather the result of a new financial psychology, admirably summed up in the term "new era." Thus from the points of view of the investing public and the borrowing corporations, security affiliates have not greatly changed the banking structure. While adding little to the standards of the profession, they have probably been no worse as originators and distributors of securities than the "regular" investment houses;[25] as far as endowing

[24] "'The decline in security values, while embarrassing, has been almost negligible as a direct cause of bank closings,' said John W. Pole, Comptroller of the Currency, this week."—*Business Week*, January 28, 1931, p. 16.

[25] No comparative study of issues of investment houses and banks has been made, in view of the difficulty of getting a standard of evaluation, and because of the fact that most issues were joint activities of banks, bank affiliates, and investment houses.

their parent banks with the ability to do all sorts of financing is concerned, they seem to have few advantages, because the cost of such financing is the determinant.

However, at the present moment, when the removal of banks and bank affiliates from the security business is being contemplated, the viewpoint of industry and its financial needs is important. These institutions, which now seem to hold more than half of the security originating and distributing power of the country, cannot be removed without throwing the entire burden of financing onto the private bankers. Present volume does not make this such an overwhelming load; looking forward to the future revival, however, it would seem that Mr. Anderson of the Chase National Bank[26] and the American Bankers' Association[27] are correct when they fear that the mechanism may not be sufficient to handle the needs. This is especially true in view of the fact that the private houses have not the wide distribution facilities of the bank organizations.

The Glass Bill

There is an alternative possibility, however, in that one result of the passage of the Glass Bill (S. 4412) may be a dropping of national-bank charters and Federal Reserve memberships by some institutions, and a reversion to state supervision which would permit underwriting and distribution of securities. While such action would leave some investment-banking machinery intact, it seems undesirable in view of the probable resultant lowering of commercial-banking standards, as well as the upsetting of the trend toward a unified, singly supervised banking system in which banking standards can be maintained and improved.

The legislation is objectionable on another ground, namely, its attempt to distinguish between commercial and investment banking. Unfortunately, these two financial activities are not thus separable. In the first place, the line of demarcation between them is neither abrupt nor definite. The concept of long-term *vs.* short-term credit cannot hold in a financial system where investment banks finance by short-time notes and bonds, and where banks give lines of credit under which almost perpetual accommodation is rendered. Similar needs of industry are satisfied by both types of banking; the choice between investment and commercial credit depends, in a large measure, upon market conditions. Even the method by which these two classes of institutions transmit the public funds into industry are not distinct, commercial paper being bought and sold very much in the manner of an investment security. On the whole, therefore, there is little basis in theory for a sharp differentiation between investment and commercial banking.

Furthermore, to advance a more practical argument, the existence of investment banking without commercial-banking credit is impossible, unless our whole financial structure is to be reorganized.[28] In view of the need for rapid capital turnover as the only basis for profits, the freezing of the

[26] *New York Times*, April 25, 1932.
[27] *New York Times*, April 24, 1932.

[28] "British financial practice makes the separation more definite; the distribution of new issues through brokers and on the stock exchange, and the lack of pegging of prices, makes the need for bank credit smaller."—Willis, H. Parker, and Bogen, Jules I. *Investment Banking*. New York, Harper & Bros., 1929. Pp. 498–502.

investment banker's funds is uneconomic; therefore, commercial banks are needed to make loans on security collateral to facilitate the process. It is seen, therefore, that, unless investment-banking technique undergoes a radical change, the commercial banks will continue to employ some of their funds in connection with the security business, and stocks and bonds seem likely to continue as partial backing for deposits.

Legislation, in its present form, aims at the eventual abolition of the security business of banks and the restriction of loaning on security collateral and to security organizations. To predict the final form in which the bill will be passed is impossible, but it seems safe to assume that the restrictions will be no greater than at present. Yet, even under the present rigorous form, banks are not entirely restricted from operations allied to security flotation; to the extent that they make collateral loans and invest in securities, they will still incur the risks attached to such activities.

However, granting that the proposed law may succeed to some degree in its aim to add to the safety of banking, it will fail utterly to improve the quality of investment banking. It contemplates throwing it out of those institutions where there is a possibility of regulation, into those where such supervision is seemingly impossible. On this basis, then, the argument of the American Bankers' Association[29] seems sound; namely, that the regulation of investment-banking operations in commercial banks and affiliates is a better solution to the problem than the elimination of these activities from the banks.

[29] See footnote 27.

If bank supervision by either the Comptroller of the Currency or the Federal Reserve Board were to be made into that active and effective regulation which Mr. Broderick of New York has proposed,[30] regulation of security operations would result in the desired safety of commercial banking. Such supervision would, at the same time, give some measure of control over investment banking, which might aid in improving the quality of new issues.

Through the use of periodic examination of bank and affiliate, and the elimination of overextended interrelationships in the form of loans, investments, *etc.*, such regulation would aim at maintaining the safety of the commercial bank. It would inform the public and stockholders as to the bank and affiliate conditions by the publication of statements and lists of security holdings. It would, perhaps, formulate some rules of conduct as to the investigation, advertising, and selling of new issues.

Conclusion

In conclusion, therefore, it is suggested that safer commercial banking can be achieved only by good management, and not by Congressional fiats aimed at the elimination of risks; that effective regulation may, however, aid in achieving this safety; that such

[30] Among his proposed amendments to the New York State banking law, is one which would permit the Superintendent of Banking to remove officers and directors from office for violation of the banking law, a proposal, which, by the threat it would contain, would seemingly aid much in the effectiveness of regulation.—Based on the Memorandum of the Superintendent of Banks in his report of January 7, 1931—quoted in the Hearings before a Subcommittee of the Committee on Banking and Currency, U. S. Senate, 71st Congress, Third Session, pursuant to S. Res. 71, pp. 274–278.

regulation of the banks and their affiliates may improve the quality of investment banking, to the extent that supervision can be exercised, and, therefore, that the examination, publicity and regulation of affiliate and bank operations in securities seems closer to the desired solution than does the abolition thereof. These conclusions are strengthened by the handicap which would be placed on the satisfying of industry's financial needs, if banks, now the most important organizations in the investment banking field, were to be removed from it.

It is not claimed that banks should enter the security business, originally; in the present condition of banking and investment machinery, however, it is believed that the regulation of these organizations is wiser than their abolition.